

**Office of Medical Services  
Supplements  
to the Department of State Pandemic Influenza Plan**

Supplement One: Pandemic Influenza Surveillance

- I. Rational
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- II. Interpandemic Period
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  - B. Testing for avian influenza A (H5N1) should be considered on a case-by-case basis in consultation with DOS/MED for hospitalized or ambulatory patients with:
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Executive Summary

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- D. [DOS managers should ensure that materials for respiratory hygiene/cough etiquette \(tissues and receptacles for their disposal\) and hand hygiene are available.](#)
- E. [Health unit personnel should evaluate in the health unit or telephonically employees with respiratory symptoms before those employees are permitted back into the workplace.](#)
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  - B. [Coordination of message development and release among DOS Missions CDC, WHO and local health officials is critical to help avoid fear and anxiety, and impede response measures](#)
  - C. [Technically correct and succinct information presented during an influenza pandemic will minimize speculation and avoid over-interpretation of data, overly confident assessments of investigations and control measures.](#)
  - D. [The influenza pandemic will generate immediate, intense, and sustained demand for information from the public, healthcare providers, policy makers, and news media](#)
  - E. [Dissemination of timely, transparent, accurate, science-based information about pandemic influenza and the progress of the response can build public trust and confidence.](#)
- III. [Recommendations for the Interpandemic and Pandemic Alert Periods](#)
  - A. [Assessing communications capacity and needs](#)
  - B. [Conducting collaborative planning](#)
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- IV. [Recommendations for the Pandemic Period](#)
  - A. [Activating emergency communications plans](#)
  - B. [Refining and delivering messages](#)
  - C. [Providing timely, accurate information](#)
  - D. [Promptly addressing rumors, misperceptions, stigmatization, and unrealistic expectations about the capacity of public and private health providers](#)

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##### [Executive Summary](#)

- I. [Rationale](#)
- II. [Interpandemic and Pandemic Alert Periods](#)
  - A. [DOS/MED and MED/MHS will:](#)
  - B. [DOS/MED/Mental Health Services and overseas RMO/Ps will work with DOS/MED staff, RMOs, FSHPs and post management to establish workforce resilience programs that will help deployed healthcare and volunteer workers](#)

- prepare for, cope with, and recover from the social and psychological challenges of emergency field work.
- III. Pandemic Period
  - A. DOS/MED /Mental Health Services overseas health units will:
  - B. Post-deployment/assignment
- Box 1. Psychosocial Issues for Response Workers
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- II. Healthcare Planning and Response
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  - E. Facility access
  - F. Occupational health
  - G. Psychosocial health services
  - H. Local healthcare
  - I. Continuation of essential medical services
  - J. Alternative care sites
- III. Infection Control
  - A. Emphasis will be placed on basic infection control principles: limiting contact between infected and non-infected persons; isolating infected persons (stay at home if ill); promoting spatial separation of at least 3 feet; protection of caregivers in healthcare settings by wearing goggles, gowns and surgical masks, (N-95 Respirator masks if doing aerosolizing procedures, wearing gloves for respiratory secretion contact; performing hand hygiene (washing) after contact with potentially infected persons; containing infectious respiratory secretions (masking the ill and utilization of respiratory hygiene/cough etiquette.
  - B. The elements of respiratory hygiene/cough etiquette include: Education of all staff, healthcare workers (HCW), and visitors by posing signs with instructions, cough and sneeze covering (tissues usage), encouragement to utilize hand washing materials, and spatial separation of greater than 3 feet.
  - C. Masks, gloves, gowns and goggles (Personal Protective Equipment, PPE) are utilized only by healthcare workers or placed on potential patients at HCW discretion if HHS and MED staffed Occupational clinics are established.
- IV. Clinical Guidelines
- V. Roles and responsibilities of MED Occupational Health Units and Clinical Laboratories
- VI. Vaccine Distribution and Use
- VII. Antiviral Drug Distribution and Use
- VIII. Community Disease Control and Prevention
- IX. Travel-Related Risk of Disease Transmission
- X. Public Health Communications

- A. During influenza pandemic, employees need information about what is known and unknown and interim guidance to formulate decisions to help protect their health and health of others.
  - B. Coordination of message development and release among DOS facilities is critical to help avoid fear and anxiety, and impede response measures.
  - C. Technically correct and succinct information presented during influenza pandemic should minimize speculation and avoid over-interpretation of data, overly confident assessments of investigations and control measures
  - D. MED, the DEAC, PA and the IO will develop effect information dissemination plans for an influenza pandemic including:
  - E. DOS domestic and Federal hotlines, such as the CDC-INFO telephone line (1-800-CDC-INFO; 1-800-232-4636), should be available for public information. Local hotlines can tailor information to their localities. Hotline staff should be trained in advance and have access to the pandemicflu.gov website and to a local database of frequently asked questions.
  - F. PA and the IO should prepare contingency plans for increased media demands. Early-confirmed cases of pandemic influenza will require preparations for focused media attention from local and international publications, especially from television. Regularly scheduled press briefings (daily) may reduce the volume of inquiries
  - G. PA and IO should develop and coordinate procedures with other agencies and organizations to avoid duplication when developing and pre-testing messages, and in training media spokespersons.
- XI. Psychosocial Considerations and Information Needs

## HANDY LINKS:

### Hygiene:

<http://www.cdc.gov/handhygiene/>  
[http://www.cdc.gov/ncidod/dhqp/gl\\_isolation.html](http://www.cdc.gov/ncidod/dhqp/gl_isolation.html)  
<http://www.cdc.gov/niosh/topics/eye/eye-infectious.html>  
[http://www.cdc.gov/ncidod/dhqp/gl\\_enviroinfection.html](http://www.cdc.gov/ncidod/dhqp/gl_enviroinfection.html)  
[http://www.cdc.gov/ncidod/dhqp/gl\\_enviroinfection.html](http://www.cdc.gov/ncidod/dhqp/gl_enviroinfection.html)  
[http://www.cdc.gov/ncidod/dhqp/gl\\_isolation.html](http://www.cdc.gov/ncidod/dhqp/gl_isolation.html)  
<http://www.cdc.gov/ncidod/dhqp/ppe.html>)

### Occupational Health Issues:

[www.cdc.gov/flu/professionals/infectioncontrol/resphygiene.htm](http://www.cdc.gov/flu/professionals/infectioncontrol/resphygiene.htm)

### Updated listings of areas affected by avian influenza A (H5N1):

The OIE - [http://www.oie.int/eng/en\\_index.htm](http://www.oie.int/eng/en_index.htm)

The WHO - [http://www.who.int/csr/disease/avian\\_influenza/en/index.html](http://www.who.int/csr/disease/avian_influenza/en/index.html)

CDC <http://www.cdc.gov/flu/avian/>

### Initial Management of Patients:

Polysaccharide vaccine: <http://www.cdc.gov/nip/publications/VIS/vis-ppv.pdf>

Conjugate vaccine: <http://www.cdc.gov/nip/publications/VIS/vis-PneumoConjugate.pdf>

**Criteria for Evaluation of Patients with Possible Pandemic Influenza:**  
[www.pandemicflu.gov](http://www.pandemicflu.gov) and [www.cdc.gov/flu/](http://www.cdc.gov/flu/).

**Online VAERS reporting:** [www.vaers.hhs.gov](http://www.vaers.hhs.gov) or  
<https://secure.vaers.org/scripts/VaersDataEntry.cfm>

**Monitoring and Data Collection:**  
<http://www.fda.gov/medwatch/>

**Isolation:**  
<http://www.ahrq.gov/research/altsites.htm>).  
<http://www.hhs.gov/pandemicflu/plan/pdf/S08.pdf>

**CDC's Travelers' Health website:** [www.cdc.gov/travel/](http://www.cdc.gov/travel/)  
**DOS/Travax EnCompass website:** [www.travax.com](http://www.travax.com)  
**CDC's ban on importation of birds and bird products:**  
[www.cdc.gov/flu/avian/outbreaks/embargo.htm](http://www.cdc.gov/flu/avian/outbreaks/embargo.htm).

### **Recommendations for the Interpandemic and Pandemic Alert Periods**

Make overseas mission and Federal hotlines available (CDC-INFO telephone line 1-800-CDC-INFO; 1-800-232-4636). Local hotlines can tailor information to their localities with the Hotline staff trained in advance with access to the [www.pandemicflu.gov](http://www.pandemicflu.gov) website and to a local database of frequently asked questions.

### **Surveillance Roles and Responsibilities**

See <http://eic.rrc.dc.gov/eic/cwp/view.asp?a=3&Q=563314&PM=1> as the website for the District of Columbia Pandemic Influenza preparedness that designates public health authorities for DOS facilities in the District.

See [http://www.vdh.virginia.gov/epi/VaPanFluPlan\\_v062005\\_F.pdf](http://www.vdh.virginia.gov/epi/VaPanFluPlan_v062005_F.pdf) as the website for the Virginia Pandemic Influenza Preparedness that designates public health authorities for DOS facilities in Virginia.

See <http://edcp.org/pdf/THEPLAN3READ.pdf> as the website for the Maryland Pandemic Influenza Preparedness that designates public health authorities for DOS facilities in Maryland.

**See <http://www.pandemicflu.gov>/ for all other states' websites and links for Pandemic Influenza Preparedness that designates public health authorities for DOS Offices or facilities in all other domestic locations.**



## **Supplement One:**

### **Pandemic Influenza Surveillance**

#### Summary of Public Health Roles and Responsibilities in Pandemic Influenza Surveillance

Surveillance among U.S. mission communities for influenza virus (virological surveillance) and for influenza like illness (disease surveillance) will be necessary to help minimize the impact of a pandemic. Information obtained from such surveillance will allow DOS/MED, CDC and local public health authorities to make more definitive statements regarding Pandemic Influenza (PI) characteristics, incidence and spread; it will help them to track changes in the virus' behavior such as resistance to antiviral drugs or vaccines. Disease surveillance can provide clinical information regarding patient characteristics, onset and duration of symptoms, and need for hospitalization. This knowledge will also help authorities make predictions about disease impact upon any given community as well as its' implications for global health.

Overseas Health Units are encouraged to gather information from local sources (Ministry of Health [MOH], Post Medical Advisors [PMAs], members of your journal clubs, etc.) and join on-line surveillance communities (e.g. Pro-MED, EPI-X, etc.) in order to keep abreast of this very important issue.

DOS/MED will collect reports of surveillance observations and experiences from the field to be shared with the CDC/HHS and WHO and to form a basis for ongoing guidance. This advice will evolve as an actual pandemic takes place.

#### **I. Rationale**

Pandemic influenza surveillance includes surveillance for various strains of influenza viruses (virological surveillance) and for influenza-associated illness and deaths (disease surveillance). Virological and disease surveillance data can help decision-makers identify effective treatment and containment strategies and re-evaluate recommended priority groups for vaccination and antiviral therapy.

- A. Virological surveillance:
  - 1. Rapidly detects the introduction of a pandemic influenza virus in locales and DOS/MED overseas health units.
  - 2. Tracks the virus' introduction into local areas and U.S. mission communities.
  - 3. Monitors changes in the pandemic virus virulence, transmissibility and the development of antiviral resistance.
- B. Disease surveillance:
  - 1. Detects increases in influenza-like illness (ILI) in the community.
  - 2. Monitors the pandemic's impact on health (e.g., by tracking outpatient visits, hospitalizations, and deaths).

3. Tracks trends in influenza disease activity and identifies populations that are most severely affected (e.g., old vs. young).

## II. Interpandemic Period

DOS/MED overseas health units should participate with established networks for influenza surveillance (DOD, WHO/OIE, CDC, host country MOH, local NGOs, business community) as circumstances and opportunities dictate.

Enhanced surveillance efforts by DOS/MED providers, where possible, are needed to identify patients at increased risk for influenza A (H5N1).

- A. Testing for avian influenza A (H5N1) is indicated for hospitalized patients with:
  1. Radiographically confirmed pneumonia, acute respiratory distress syndrome (ARDS), or other severe respiratory illness for which an alternative diagnosis has not been established, and
  2. History of travel within 10 days of symptom onset to a country with documented avian influenza A (H5N1) infections in poultry and/or humans. (For a regularly updated listing of H5N1-affected countries, see the World Organization for Animal Health [OIE] website at [http://www.oie.int/eng/en\\_index.htm](http://www.oie.int/eng/en_index.htm) and the WHO website at <http://www.who.int/en/>).
- B. Testing for avian influenza A (H5N1) should be considered on a case-by-case basis in consultation with DOS/MED for hospitalized or ambulatory patients with:
  1. Documented temperature of >100.4°F (>38°C); and
  2. One or more of the following: cough, sore throat, or shortness of breath; and
  3. History of contact with poultry (e.g., visited a poultry farm, a household raising poultry, or a bird market) or a known or suspected human case of influenza A (H5N1) in an H5N1-affected country within 10 days prior to onset of symptoms.

## III. Pandemic Alert Period

- A. Health Unit responsibilities:  
Regional Medical Officers (RMOs) and Foreign Service Health Practitioners (FSHPs) under the direction of DOS/MED shall:
  1. Monitor local influenza activity through local contacts with Health Ministries, Hospitals, Clinics, WHO facilities, CDC and DOD collaborations.
  2. Coordinate and cooperate with local or regional laboratories to isolate and subtype influenza viruses year round (e.g. with hospital labs, DOS/MED/LAB, WHO designated reference labs, DOD overseas labs), if resources are available.

3. Cooperate with any initiatives (DOS, CDC, DOD, WHO, etc.) to improve laboratory capacity for rapid identification of novel or pandemic influenza strains impacting U.S. mission communities.
  4. Contact DOS/MED immediately for any suspect human cases of infection with an avian, animal, or other novel human influenza strain.
  5. Establish agreements with local or regional laboratories to gain permission and develop logistics to facilitate rapid testing for novel influenza strains.
- B. DOS/MED responsibilities:
1. Coordinate and maintain contact with all components of the National Influenza Surveillance System and other related networks (WHO, OIE).
  2. Explore strategic deployment of and access to newer technology rapid and simple RT-PCR analyzer platforms and other rapid tests with high sensitivity/specificity for novel influenza viral strains.
  3. Utilize Epi-X in monitoring recommendations from and reporting to CDC/HHS.
  4. Notify the CDC Emergency Response Hotline (770-488-7100) and access Epi-X to report a suspected case of infection with avian influenza A (H5N1) or any other novel influenza virus when notified by overseas health units.
  5. Coordinate confirmatory laboratory testing of any suspected case with DOD and CDC or WHO reference laboratories.
  6. Determine need to request CDC and WHO assistance with case investigations in overseas U.S. mission communities.

#### IV. Pandemic Period

- A. Overseas Health Unit responsibilities:  
RMOs and FSHPs under the direction of DOS/MED should:
1. Implement enhanced surveillance for detection of the first ILI cases, consisting of:
    - a. Clinical description.
    - b. Rapid testing for influenza A, where available.
    - c. Rapid testing for novel influenza strain, where available.
    - d. Utilizing reference laboratory for subtype identification.
  2. Coordinate outpatient surveillance of patients with ILI and confirmed pandemic strains with DOS/MED, CDC, DOD, and WHO as possible.
  3. Work with DOS/MED regional or local laboratory testing networks with established influenza rapid-testing capabilities.
  4. Provide surveillance data on any patients hospitalized with ILI or confirmed pandemic influenza to DOS/MED.
  5. Provide mortality data from pandemic influenza victims to DOS/MED.
- B. DOS/MED responsibilities:
1. Provide technical surveillance support to overseas health units.

2. Assist DOS bureaus, USG agencies, NGOs, private sector entities, host country governments, and WHO in tracking the pandemic virus.
3. Issue updated case definitions and guidance for laboratory testing and enhanced surveillance.
4. Analyze influenza surveillance data and communicate significant trends to overseas medical providers on a regular and timely basis.
5. Cooperate with CDC and WHO in reporting illness, hospitalization, and mortality data from DOS Medical Program beneficiaries.

## Appendix 1.

### Novel Influenza Case Report Form (to be sent to MED, CDC, and your Post's MOH)

Name of Reporter: \_\_\_\_\_  
Institution/Organization: \_\_\_\_\_  
Contact: (a) Tele \_\_\_\_\_ (b) Fax \_\_\_\_\_ (c) E-mail \_\_\_\_\_  
Date of Report: \_\_\_\_/\_\_\_\_/\_\_\_\_ (MM/DD/YR)

Name of Pt \_\_\_\_\_ DOB \_\_\_\_/\_\_\_\_/\_\_\_\_ Age \_\_\_\_\_ Sex \_\_\_\_\_  
Pt nationality \_\_\_\_\_ Pt ethnicity \_\_\_\_\_  
Pt address \_\_\_\_\_  
Pt current location (if known) \_\_\_\_\_

**Pt Travel History past 14 days (if any):** Countries/Areas visited \_\_\_\_\_  
Length of Stay: From \_\_\_\_/\_\_\_\_/\_\_\_\_ To \_\_\_\_/\_\_\_\_/\_\_\_\_  
From \_\_\_\_/\_\_\_\_/\_\_\_\_ To \_\_\_\_/\_\_\_\_/\_\_\_\_  
Date of return to USA / Post: \_\_\_\_/\_\_\_\_/\_\_\_\_  
Pt symptomatic while on flight/ship/train? \_\_\_\_\_

**Pt Occupational History details (if any):** \_\_\_\_\_ Health Care Worker  
\_\_\_\_\_ at risk, animal-related occupation  
\_\_\_\_\_ lab related work with virus

**Pt Exposure to Animals (if any):** \_\_\_\_\_ domestic fowl (\_\_\_\_ live \_\_\_\_ dead)  
\_\_\_\_\_ wild birds (\_\_\_\_ live \_\_\_\_ dead)  
\_\_\_\_\_ swine (\_\_\_\_ live \_\_\_\_ dead)  
\_\_\_\_\_ places where animals have been kept (when?/where?)

**Pt Exposure to sick Humans (if any):** \_\_\_\_\_ H5N1 case  
\_\_\_\_\_ Possible H5N1 case  
\_\_\_\_\_ Pt who died from undiagnosed resp illness

**\*\*Case patient would appear to be part of a "cluster" – i.e. a cluster within:**

\_\_\_\_ Household      \_\_\_\_ Hospital      \_\_\_\_ Other residential institution  
\_\_\_\_ Military barracks      \_\_\_\_ Marine House      \_\_\_\_ Embassy compound housing  
\_\_\_\_ Recreational camp      \_\_\_\_ School      \_\_\_\_ Extended family  
\_\_\_\_ Daycare setting      \_\_\_\_ Other

**LAB:** Positive Influenza A by "IFA" or other test? \_\_\_\_yes \_\_\_\_no \_\_\_\_unknown

#### PROPHYLAXIS Taken (If any):

Influenza vaccine taken in the past 6 months? \_\_\_\_yes \_\_\_\_no \_\_\_\_unknown

(If yes, in which country? \_\_\_\_\_)

Any antiviral medication taken in past 7 days? \_\_\_\_yes \_\_\_\_no \_\_\_\_unknown

(If yes, name of med \_\_\_\_\_; dates taken: \_\_\_\_/\_\_\_\_/\_\_\_\_ to \_\_\_\_/\_\_\_\_/\_\_\_\_)

#### DETAILS OF HOSPITAL ADMISSION (if any): \_\_\_\_\_ None

Date of Admission: \_\_\_\_/\_\_\_\_/\_\_\_\_ Hospital \_\_\_\_\_

Date of Transfer: \_\_\_\_/\_\_\_\_/\_\_\_\_ Hospital \_\_\_\_\_

Date of Termination of Hospital Stay: \_\_\_\_/\_\_\_\_/\_\_\_\_ (\_\_\_\_discharged \_\_\_\_died)

Any mechanical ventilation? \_\_\_\_yes \_\_\_\_no \_\_\_\_unknown

Admitted to ICU? \_\_\_\_yes \_\_\_\_no \_\_\_\_unknown

Isolated within hospital? \_\_\_\_yes \_\_\_\_no \_\_\_\_unknown (if yes, dates: \_\_\_\_\_)

Cohorted within hospital? \_\_\_\_yes \_\_\_\_no \_\_\_\_unknown (if yes, dates: \_\_\_\_\_)

**PT OUTCOME:** \_\_\_\_Recovered \_\_\_\_Deceased \_\_\_\_Lost to Follow-Up

Date Final Status was determined: \_\_\_\_/\_\_\_\_/\_\_\_\_

## Appendix 2.

### Suspected Pandemic Influenza Encounter Form

Patient's name: \_\_\_\_\_ Age: \_\_\_\_\_ Today's Date: \_\_\_\_\_ Medical Record# : \_\_\_\_\_

#### History of Present Illness

Date of illness onset: \_\_\_\_\_

*During the past 2 weeks:*

Where have you been? \_\_\_\_\_

Any exposure to any birds or animals (your home, the market, friend's home, zoo, etc.)? \_\_\_\_\_

Any exposure to someone who has been sick? \_\_\_\_\_

Who shares your home with you? \_\_\_\_\_

#### Key flu symptoms:

☐ Fever  
☐ Cough  
☐ Sore throat  
☐ Shortness of Breath  
☐ Body aches  
☐ Headaches

#### Other symptoms:

☐ Runny nose (clear)      ☐ Teeth hurt  
☐ Runny nose (yellow-green)      ☐ Ear pain  
☐ Nose congested/stuffy      ☐ Chills  
☐ Headache (face/eyes)      ☐ Sweats  
☐ Stomach problems      ☐ Vomiting  
☐ Bleeding (nose, throat, gums)      ☐ Diarrhea

#### Physical Examination

		Normal	Abnormal	Other information
Temperature: _____	General	___	___	___
Blood Pressure: ____/____	Head	___	___	___
HR: _____	Eyes	___	___	___
RR: _____	Ears	___	___	___
Pulse Oximetry: _____	Nose	___	___	___
(if available)	Neck	___	___	___
	Heart	___	___	___
	Lungs	___	___	___
	Abdomen	___	___	___

#### Diagnostic Evaluation (as indicated)

Chest X-ray: ☐ Not indicated ☐ Normal ☐ Abnormal

Rapid Influenza Test: ☐ Not done ☐ Negative ☐ Positive (Name of Test/Type of Test: \_\_\_\_\_)

WBC Count: \_\_\_\_\_ Neutrophils: \_\_\_\_\_ Lymphocytes \_\_\_\_\_ Monocytes \_\_\_\_\_ Eosinophils \_\_\_\_\_

SGOT \_\_\_\_\_ SGPT \_\_\_\_\_ Gamma GT \_\_\_\_\_ BUN \_\_\_\_\_ Creatinine \_\_\_\_\_

#### Assessment/Plan

Pandemic influenza likely because: \_\_\_\_\_ (please fill in CASE REPORT FORM)

Pandemic influenza unlikely because: \_\_\_\_\_

#### Symptomatic Treatment:

☐ NSAIDs (no aspirin to < 18 yrs)  
☐ Acetaminophen  
☐ Bed Rest / lots of fluids  
☐ Admit to hospital  
☐ Confine to home  
☐ Re-check in \_\_\_\_\_ days  
☐ Other: \_\_\_\_\_

#### Prescriptive Treatment:

☐ oseltamivir (Tamiflu): \_\_\_\_\_ mg taken \_\_\_\_\_ times/day x \_\_\_\_\_ days  
☐ other antiviral: \_\_\_\_\_  
☐ antibiotic: \_\_\_\_\_  
☐ respiratory meds: \_\_\_\_\_  
☐ other medications/treatments: \_\_\_\_\_  
☐ influenza immunization (give type) \_\_\_\_\_

Contact Person for this pt \_\_\_\_\_ Tele number: \_\_\_\_\_  
Clinician's signature \_\_\_\_\_ Date \_\_\_\_\_

## **Supplement Two: Clinical Laboratory**

### **Executive Summary**

During the interpandemic, pandemic alert and pandemic periods, overseas health unit and DOS Regional Laboratories will coordinate with DOS/MED how best to utilize local, regional and CDC diagnostic resources. MED/Lab and overseas RMTs will seek to enhance influenza testing capabilities, including rapid testing, and provide training in specimen handling and biosafety. DOS/MED will support and provide guidance to RMTs in the field regarding these functions. As resources allow, DOS/MED will direct deployment of safe and effective diagnostic tests and reagents.

DOS/MED and overseas healthcare providers and RMTs will adhere to the interim recommendations for evaluating human influenza A (H5N1) contained in this supplement. Testing of patients meeting criteria for suspicion of H5N1 infection should be coordinated with DOS/MED. DOS/MED and overseas healthcare providers and RMTs will also adhere to the specimen guidance detailed, including proper collection of respiratory specimens, blood components, and autopsy specimens. This supplement provides shipping instructions and guidance for rapid influenza testing. Before working with novel avian or influenza viruses, laboratory and healthcare workers should have baseline serum samples drawn and stored for future reference. Influenza vaccination is recommended. For laboratory workers, oseltamivir prophylaxis is not required.

For domestic DOS employees, occupational health units that identify patients with suspected novel or pandemic influenza will refer them to local healthcare providers who will be responsible in coordination with state and local public health authorities to order and supervise clinical laboratory testing. Domestic DOS employees working in locations without occupational health units should monitor their health status and report to their local healthcare providers should they become ill with an influenza-like illness.

### **I. Rationale**

The goals of diagnostic testing during a pandemic are to:

- A. Identify the earliest cases of pandemic influenza (whether the pandemic begins in the host country or elsewhere).
- B. Support disease surveillance to monitor the pandemic's geographic spread and impact of interventions.
- C. Facilitate clinical treatment by distinguishing patients with influenza from those with other respiratory illnesses.
- D. Monitor circulating viruses for antiviral resistance.

## II. Overview

Diagnostic testing for pandemic influenza virus may involve a range of laboratory assays, including rapid antigen tests, reverse-transcription polymerase chain reaction (RT-PCR), virus isolation, and immunofluorescence antibody (IFA) assays. Once a pandemic is underway, the need for laboratory confirmation of clinical diagnoses may decrease as the virus becomes widespread.

## III. Interpandemic and Pandemic Alert Periods

- A. Health Unit and DOS regional laboratories responsibilities:
  - 1. Develop good working relationships between healthcare providers and local reference laboratories that will facilitate diagnostic activities during a pandemic.
  - 2. RMOs, FSHPs and Regional Laboratory Technologists (RMTs) should build partnerships with local reference laboratories during the regular influenza season.
  - 3. Conduct preparedness planning to support the response to an influenza pandemic.
  - 4. Address laboratory surge capacity issues.
    - i. Health unit laboratory, if available.
    - ii. Local reference laboratories.
  - 5. Contact DOS/MED if a suspected human case of infection with any novel influenza A virus occurs.
  - 6. Send clearly labeled specimens from patients with suspected novel influenza to testing facilities designated and/or approved by DOS/MED (WHO, CDC, DOD).
  - 7. Conduct testing for novel subtypes of influenza viruses once new technology rapid testing platforms are feasible.
    - a. Be prepared to process and, once available, to test specimens from suspected cases of infection with:
    - b. Avian influenza A (H5N1) and other avian influenza viruses
    - c. Other animal influenza viruses (e.g., swine influenza viruses)
    - d. New or re-emergent human influenza viruses (e.g., H2) with pandemic potential
    - e. Specimen management
      - i. DOS/MED/LAB will inform and educate RMTs, RMOs and FSHPs about safe and effective methods for specimen collection and management, making use of specified guidelines.
      - ii. Procedures for specimen collection, handling, and shipping during a pandemic will be the same as those used for seasonal disease surveillance.
      - iii. Once the pandemic is underway, healthcare providers will rely on clinical criteria and, if available, rapid test kits.



- iv. Conduct testing of suspected subtypes of influenza A, including novel strains, only if appropriate laboratory capacity and biocontainment equipment are available.
  - f. If available and as resources allow, in coordination with MED/LAB, health unit laboratories may use RT-PCR platforms not requiring BSL-2 containment to test clinical specimens from suspected human cases of avian influenza to identify and subtype influenza A viruses (e.g., H1, H3, H5, and H7).
- 8. Send specimens to CDC, DOD or WHO Reference Labs in consultation with MED/LAB if a patient meets the clinical and epidemiological criteria for infection with a novel influenza virus and:
  - a. Tests positive for influenza A by local RT-PCR or by rapid diagnostic testing, *or*
  - b. Tests negative for influenza A by rapid diagnostic testing and/or RT-PCR testing for influenza is not available
  - c. Health unit laboratories that receive diagnostic specimens from patients with suspected novel influenza (based on clinical and epidemiological data) should contact MED/LAB for testing guidance.
- 9. Consider a positive RT-PCR test result for a novel influenza strain as presumptive pending testing by a second reference laboratory (WHO, DOD, CDC).
- 10. Institute surveillance for influenza-like illnesses (ILI) among laboratory personnel working with novel influenza viruses.

B. DOS/MED/LAB responsibilities:

- 1. Provide technical support to Regional and LES Medical Technologists, where applicable, in identifying mechanisms to analyze novel influenza virus subtypes—including avian isolates and human isolates with pandemic potential.
- 2. Provide guidance on biosafety and safe handling of respiratory specimens from potential cases of pandemic influenza.
- 3. Provide overseas healthcare providers with information on how to contact a designated reference laboratory when a novel influenza subtype is suspected and how to handle, label, and ship clinical specimens for diagnostic evaluation.

#### IV. Pandemic Period

A. Health Unit and DOS regional laboratories responsibilities:

- 1. Optimize high sensitivity/specificity rapid gatekeeper testing capabilities, as available and as resources permit.
- 2. Expect to decrease the level of testing as the virus becomes widespread, but expedite confirmation testing at the beginning of the pandemic.
- 3. Send selected specimens from possible pandemic influenza patients to reference laboratories identified by DOS/MED.

4. Adhere to CDC guidelines for safe handling, processing, and rapid diagnostic testing of clinical specimens from patients who meet the case definition for pandemic influenza.
5. Maintain the safety practices.
6. Protect the health of laboratory workers during a pandemic.
  - a. Conduct laboratory procedures and specimen handling under appropriate biosafety conditions.
  - b. Encourage routine seasonal and, if available, pandemic influenza vaccination of all eligible laboratory personnel who are exposed to specimens from patients with respiratory infections.
  - c. See: <http://bmb1.od.nih.gov/sect3bsl2.htm>

B. DOS/MED/LAB responsibilities:

1. Work with health unit and DOS regional laboratories to identify and explore the availability and the safe and effective use of diagnostic tests and reagents as resources allow.
2. Coordinate with CDC the role that DOS laboratories might play in surveillance strategies.
3. MED/LAB will provide overseas health units with:
  - a. **Specimen submission forms** that specify the clinical and epidemiological data that should accompany clinical specimens sent to regional or U.S. reference laboratories.
  - b. Rapid communication of test results and reminders that a negative test result (especially by rapid diagnostic testing) might not rule out influenza and should not affect patient management or infection control decisions.
  - c. Guidance on the use of commercially available rapid diagnostic tests for the detection of influenza A.
  - d. Guidance on which specimens to send to regional and U.S. reference laboratories as the pandemic continues.

C. Laboratory Biosafety Guidelines for Handling and Processing Specimens or Isolates of Novel Influenza Strains

1. DOS/MED does not at this time anticipate recommending the use of commercial antigen detection testing for influenza requiring BSL-2 containment using a Class II biological safety cabinet.
2. Clinical specimens from suspected novel influenza cases may be tested using testing platforms that do not require using standard BSL-2 work practices.

D. Respiratory Specimens

1. Nasopharyngeal wash/aspirates are the specimen of choice for detection of most respiratory viruses and are the preferred specimen type for children aged <2 years.
2. Respiratory specimens for detection of most respiratory pathogens, and influenza in particular, are optimally collected within the first 3 days of the onset of illness.
3. Collection of specimens from the upper respiratory tract - nasopharyngeal wash/aspirate:

- a. Have the patient sit with head tilted slightly backward.
  - b. Instill 1 ml–1.5 ml of nonbacteriostatic saline (pH 7.0) into one nostril. Flush a plastic catheter or tubing with 2 ml–3ml of saline. Insert the tubing into the nostril parallel to the palate. Aspirate nasopharyngeal secretions. Repeat this procedure for the other nostril.
  - c. Collect the specimens in sterile vials. Label each specimen container with the patient's ID number and the date collected.
  - d. If shipping domestically, use cold packs to keep the sample at 4°C. If shipping internationally, pack in dry ice (see shipping instructions below).
  - e. Nasopharyngeal or oropharyngeal swabs:
  - f. Use only sterile Dacron or rayon swabs with plastic shafts. Do **not** use calcium alginate swabs or swabs with wooden sticks, as they may contain substances that inactivate some viruses and inhibit PCR testing.
  - g. To obtain a **nasopharyngeal swab**, insert a swab into the nostril parallel to the palate. Leave the swab in place for a few seconds to absorb secretions. Swab both nostrils.
  - h. To obtain an **oropharyngeal swab**, swab the posterior pharynx and tonsillar areas, avoiding the tongue.
  - i. Place the swabs immediately into sterile vials containing 2 ml of viral transport media. Break the applicator sticks off near the tip to permit tightening of the cap. Label each specimen container with the patient's ID number and the date the sample was collected.
  - j. If shipping domestically, use cold packs to keep the sample at 4°C. If shipping internationally, pack in dry ice.
  - k. All types of respiratory specimens may be used in RT-PCR tests. Fresh-frozen unfixed specimens may also be submitted for RT-PCR.
4. Collection of specimens from the lower respiratory tract - bronchoalveolar lavage, tracheal aspirate, or pleural fluid tap
    - a. During bronchoalveolar lavage or tracheal aspirate, use a double-tube system to maximum shielding from oropharyngeal secretions.
    - b. Centrifuge half of the specimen, and fix the cell pellet in formalin. Place the remaining unspun fluid in sterile vials with external caps and internal O-ring seals. If there is no internal O-ring seal, then seal tightly with the available cap and secure with Parafilm®. Label each specimen container with the patient's ID number and the date the sample was collected.
    - c. If shipping domestically, use cold packs to keep the sample at 4°C. If shipping internationally, ship fixed cells at room temperature and unfixed cells frozen (see shipping instructions below).

#### E. Sputum

1. Educate the patient about the difference between sputum and oral secretions.

2. Have the patient rinse the mouth with water and then expectorate deep cough sputum directly into a sterile screw-cap sputum collection cup or sterile dry container.
3. If shipping domestically, use cold packs to keep the sample at 4°C. If shipping internationally, pack in dry ice (see shipping instructions below).

F. Blood Components

1. Both acute and convalescent serum specimens should be collected for antibody testing. Collect convalescent serum specimens 2–4 weeks after the onset of illness.
2. Collect 5 ml–10 ml of whole blood in a serum separator tube. Allow the blood to clot, centrifuge briefly, and collect all resulting sera in vials with external caps and internal O-ring seals. If there is no internal O-ring seal, then seal tightly with the available cap and secure with Parafilm®.
3. The minimum amount of serum preferred for each test is 200 microliters, which can easily be obtained from 5 ml of whole blood. A minimum of 1 cc of whole blood is needed for testing of pediatric patients. If possible, collect 1 cc in an EDTA tube and in a clotting tube. If only 1cc can be obtained, use a clotting tube.
4. Label each specimen container with the patient's ID number and the date the specimen was collected.
5. If unfrozen and transported domestically, ship with cold packs to keep the sample at 4°C. If frozen or transported internationally, ship on dry ice.

G. Autopsy Specimens

1. CDC can perform immunohistochemical (IHC) staining for influenza A (H5) viruses on autopsy specimens. Viral antigens may be focal and sparsely distributed in patients with influenza, and are most frequently detected in respiratory epithelium of large airways. Larger airways (particularly primary and segmental bronchi) have the highest yield for detection of influenza viruses by IHC staining. Collection of the appropriate tissues ensures the best chance of detecting the virus by IHC stains. If influenza is suspected, a minimum total of 8 blocks or fixed-tissue specimens representing samples from each of the following sites should be obtained and submitted for evaluation:
  - a. Central (hilar) lung with segmental bronchi
  - b. Right and left primary bronchi
  - c. Trachea (proximal and distal)
  - d. Representative pulmonary parenchyma from right and left lung

In addition, representative tissues from major organs should be submitted for evaluation. In particular, for patients with suspected myocarditis or encephalitis, specimens should include myocardium (right and left ventricle) and CNS (cerebral cortex, basal ganglia, pons, medulla, and cerebellum). Specimens should be included from any other organ showing significant gross or microscopic pathology.

2. Specimens may be submitted as:
3. Fixed, unprocessed tissue in 10% neutral buffered formalin, or
4. Tissue blocks containing formalin-fixed, paraffin-embedded specimens, or
5. Unstained sections cut at 3 microns placed on charged glass slides (10 slides per specimen)
6. Specimens should be sent at room temperature (**NOT FROZEN**).
7. Fresh-frozen unfixed tissue specimens may be submitted for RT-PCR.

Include a copy of the autopsy report (preliminary, or final if available), and a cover letter outlining a brief clinical history and the submitter's full name, title, complete mailing address, phone, and fax numbers, in the event that CDC pathologists require further information. Referring pathologists may direct specific questions to CDC pathologists. The contact number for the Infectious Disease Pathology Activity is 404-639-3133, or the pathologists can be contacted 24 hours a day, 7 days a week through the CDC Emergency Response Hotline at 770-488-7100.

#### H. Shipping Instructions

1. Health Units should call DOS/MED/LAB before sending specimens for influenza A reference testing. MED/LAB will coordinate with CDC.
2. Specimens should be sent by Priority Overnight Shipping for receipt within 24 hours. Samples (such as fresh-frozen autopsy samples for RT-PCR or other clinical materials) may be frozen at  $-70^{\circ}\text{C}$  if the package cannot be shipped within a specified time (e.g., if the specimen is collected on a Friday but cannot be shipped until Monday).
3. When sending clinical specimens, include the specimen inventory sheet (see below), include the assigned CDC case ID number, and note "Influenza surveillance" on all materials and specimens sent.
4. Include the CDC case ID number on all materials forwarded to CDC. Protocols for standard interstate shipment of etiologic agents should be followed, and are available at <http://www.cdc.gov/od/ohs/biosfty/shipregs.htm>. All shipments must comply with current DOT/IATA shipping regulations.

#### I. Rapid Diagnostic Testing for Influenza

1. Reliability and interpretation of rapid test results:  
The reliability of rapid diagnostic tests for influenza depends largely on the conditions under which they are used. Understanding some basic considerations can minimize being misled by false-positive or false-negative results. Median sensitivities of rapid diagnostic tests are generally ~70%–75% when compared with viral culture, but median specificities of rapid diagnostic tests for influenza are approximately 90%–95%. False-positive (and true negative) results are more likely to occur when disease prevalence in the community is low, which is generally at the beginning and end of the influenza season. False-

negative (and true positive) results are more likely to occur when disease prevalence is high in the community, which is typically at the height of the influenza season.

2. To minimize the occurrence of false results:
  - a. Use rapid diagnostic tests that have high sensitivity and specificity.
  - b. Collect specimens as early in the illness as possible (within 4–5 days of symptom onset).
  - c. Follow the manufacturer's instructions, including those for handling of specimens.
  - d. Consider sending specimens for viral culture when:
    - (1.) Community prevalence of influenza is low and the rapid diagnostic test result is positive, *or*
    - (2.) Disease prevalence is high but the rapid diagnostic test result is negative.

J. When rapid diagnostic tests are beneficial:

1. To test cases during an outbreak of acute respiratory disease to determine if influenza is the cause, *or*
2. To test selected patients during the influenza season, *or*
3. In the fall or winter, to test selected patients presenting with respiratory illnesses compatible with influenza to help establish whether influenza is present in a specific population and to guide healthcare providers in diagnosing and treating respiratory illnesses.
4. In general, the exclusive use of rapid tests does not address the public health need for obtaining viral isolates so that influenza virus strain subtyping and characterization can be conducted to monitor antigenic and genetic changes.
5. During an influenza pandemic, some rapid diagnostic tests may be able to detect the pandemic strain with adequate sensitivity and specificity. Rapid tests can be used by physicians to supplement clinical diagnoses of pandemic influenza.

Physicians should be reminded that a negative test result might not rule out influenza and should not affect patient management or infection control decisions.

K. Prerequisites for Working with Novel Avian or Human Influenza Viruses

1. Baseline serum samples --  
Before working with novel avian or human influenza viruses, laboratory workers should have a baseline serum sample obtained and stored for future reference.
2. Influenza vaccine --  
Laboratories should offer the current inactivated influenza vaccine to laboratory personnel. Immunization might reduce the chance of illness from exposure to human influenza viruses currently circulating in the community that could lead to confusion in monitoring for avian influenza A infection. Vaccines against novel influenza A viruses

(e.g., H5N1) are undergoing clinical trials and might be available in the future.

3. Oseltamivir prophylaxis --

It is not necessary to require oseltamivir for laboratory research personnel working with highly pathogenic influenza strains.

## **Supplement Three: Healthcare Planning**

### **Executive Summary**

This supplement provides guidance related to the myriad of tasks that will unfold should a pandemic arrive. Planning in advance will minimize confusion and despair at the time of a crisis and will also provide a framework for optimizing patient care and maintaining critical mission functions. Pre-emptive planning topics include: public relations during a pandemic; the issues to be addressed by the EAC committee/who should be on the committee; health unit staffing during a pandemic and when/how to limit access to the health unit or to mission facilities.

The need to engage local medical resources before a crisis ensues is stressed in order to determine which facilities and which specialists might be helpful should difficult patient care scenarios develop. Other areas for pre-pandemic planning include: availability and contact information for linen, laundry, and waste services; potential local sources for masks, gloves, gowns, (should increased need arise); mortuary services.

Education and training of health unit staff, perhaps to include “non-traditional” care-givers such as Administrative Assistants, EFM volunteers, retired healthcare personnel, medical students, etc., will need to be planned. Health unit nurses or other appropriate personnel should draw up audience-specific guidance on respiratory hygiene/cough etiquette. Health unit personnel need to determine which health unit areas might best serve as “special waiting areas” or “special triage” in order to minimize disease spread. The “check list” in this supplement outlines concrete tasks that can be assigned and discussed.

### **I. Planning Process**

- A. Establish or participate in a multidisciplinary pandemic influenza preparedness and response committee.
  - 1. Washington: MED in consultation with the Avian Influenza Working Group (AIWG).
  - 2. Overseas: Post EAC or subcommittee of the EAC.
- B. Consider including representation from local medical or public health community.

### **II. Planning Elements**

- A. Communications
  - 1. Identify persons responsible for updating public health reporting and a clinical spokesperson (e.g., RMO or FSHP) and a media spokesperson (e.g., PA officer).



2. Maintain discretions with forethought regarding topics of antiviral drugs and vaccines if U.S. missions possess supplies not possessed by local healthcare facilities.
3. Set forth in advance of a pandemic clear expectations for American citizen expatriates regarding what the Embassy can and cannot provide for them.
4. Direct American citizen expatriates to engage their sponsoring entities on topics regarding preparation and planning, including public health measures and drug/vaccine intervention.
5. Urge entities sponsoring American citizen expatriates to undertake planning for a possible pandemic.
6. Determine how to keep senior management, employees, health unit personnel, patients, family members and visitors informed of the ongoing impact of pandemic influenza on facilities and on the community. Consider MED and health unit-specific communications (e.g., press releases, hotlines, community bulletin board) as needed, and develop templates for these materials.

To decrease the burden on providers and to lessen exposure of the “worried well” to persons with influenza, telephone hotlines should be established to provide advice on whether to stay home or to seek care.

- a. Overseas: Identify the types of information that will be provided by the health unit and the types of inquiries that will be referred to local healthcare facilities, health ministries, CA, PA, WHO, CDC and DOS/MED.
  - b. Domestically: Identify types of information best provided by MED and types provided by local public health authorities and CDC.
  - c. Develop, in consultation with DOS/MED, training modules, protocols, and algorithms for hotline staff.
7. Confer with Information Management resources regarding IT solutions to communications challenges.  
Consult with DOS/MED on plans for a pandemic influenza hotline and/or website for public inquiries.

#### B. Education and Training Of Staff

1. Each health unit should develop an education and training plan that addresses the needs of staff, patients, family members, and visitors. Identify training materials—in different languages and at different reading levels, as needed—from HHS agencies, DOS/MED, WHO and professional associations.
2. General topics for general employee education should include:
  - a. Prevention and control of influenza
  - b. Implications of pandemic influenza
  - c. Benefits of annual influenza vaccination
  - d. Role of antiviral drugs in preventing disease and reducing rates of severe influenza and its complications
  - e. Infection control strategies for the control of influenza, including respiratory hygiene/cough etiquette, hand hygiene, standard

precautions, droplet precautions, and, as appropriate, airborne precautions.

3. MED and Health unit-specific topics for staff education should include:
  - a. Policies and procedures for the care of pandemic influenza patients, including how and where pandemic influenza patients will be treated and grouped.
  - b. Pandemic staffing contingency plans, including how the facility will deal with illness in healthcare personnel.
  - c. Policies for restricting visitors and mechanisms for enforcing these policies.
  - d. Overseas: Reporting to DOS/MED suspected cases of infection caused by novel influenza strains during the Interpandemic and Pandemic Alert Periods.
  - e. Domestically: MED reporting to local public health departments and CDC suspected cases of infection caused by novel influenza strains during the Interpandemic and Pandemic Alert Periods.
  - f. Measures to protect family and other close contacts from secondary occupational exposure.
4. Establish a schedule for training/education in-services of health unit staff.
5. Train intake and triage staff to detect patients with influenza symptoms and to implement immediate containment measures to prevent transmission.
6. DOS/MED/Office of Mental Health Services (MHS) and Regional Medical Officer/Psychiatrists (RMO/Ps) will:
  - a. Supply health unit staff with guidance for providing psychological support to patients and health unit personnel during an influenza pandemic.
  - b. Identify or develop educational materials on: signs of distress, traumatic grief, stress management, and effective coping strategies, building and sustaining personal resilience, and behavioral and psychological support resources.
  - c. Provide, as feasible, psychological-support training to appropriate individuals who are not mental health professionals (e.g., primary-care clinicians, community leaders and others).
7. DOS/MED, RMOs and FSHPs will develop strategies for training of non-clinical staff who could be asked to assist clinical personnel; students, retired health professionals, and volunteers who could be asked to provide basic nursing care (e.g., bathing, monitoring of vital signs); and other potential in-hospital caregivers (e.g., family members of patients).

C. Education of Patients, Family Members, and Visitors

Patients and others should be taught what they can do to prevent disease transmission in the hospital, at home and in community settings.

DOS/MED and overseas health units will:

1. Identify language-specific, reading-level appropriate materials for educating patients, family members, and hospital visitors during an influenza pandemic. If language-specific materials are not available for the population(s) being served, arrange for translations.
2. Develop information to distribute to all persons who enter DOS health units.
3. Identify staff to answer questions about procedures to prevent influenza transmission.

D. Facility Access

MED professionals and pandemic preparedness committees will determine in advance the criteria and procedures they will recommend to senior management to limit access to DOS facilities if pandemic influenza spreads through the community:

1. Define “essential” and “non-essential” visitors with regard to DOS facilities and health unit. Develop protocols to limit non-essential visitors.
2. Develop criteria or “tripwires” for temporary closing of DOS facilities and health units. The criteria should consider staffing ratios, isolation capacity, and risks to non-influenza patients. Determine who will make decisions about temporary closings and how and to whom these decisions will be communicated.

E. Triage, Clinical Evaluation, and Admission Procedures

1. Plan in advance for the pandemic peak, when DOS health units might be overwhelmed and triage will be needed to: 1) identify persons who might have pandemic influenza, 2) separate them from others to reduce the risk of disease transmission, and 3) identify the type of care they require (i.e., home care, medevac or hospitalization).
2. Utilize the following triage mechanisms:
  - a. Assign separate waiting areas for persons with respiratory symptoms
  - b. Assign a separate triage area for persons with respiratory symptoms
  - c. Identify a tripwire at which screening for signs and symptoms of pandemic influenza in all persons entering health units will escalate from passive (e.g., signs at the entrance) to active (e.g., direct questioning).

F. Occupational Health Overseas

DOS/MED and health units must be prepared to: 1) protect workers from exposures in the healthcare setting through the use of recommended infection control measures (see Supplement 4); 2) evaluate and manage symptomatic and ill personnel, including healthcare providers; 3) distribute and administer antiviral drugs and/or vaccines from local mission stockpiles to healthcare personnel, as recommended by DOS/MED (see Supplements 6 & 7); and 4) provide psychosocial services

to health care workers and their families to help sustain the workforce (see Supplement 11).

Health unit personnel, in consultation with DOS/MED will:

3. Establish a plan for detecting signs and symptoms of influenza in mission personnel, including healthcare workers before they report for duty.
4. Develop policies for managing workers with respiratory symptoms. Review HHS recommendations for healthcare workers with influenza:
5. (see [http://www.cdc.gov/ncidod/dhqp/gl\\_hcpersonnel.html](http://www.cdc.gov/ncidod/dhqp/gl_hcpersonnel.html))
6. Consider assigning staff who have recovered from influenza to care for influenza patients.
  - a. Do not encourage sick workers reporting for duty.
  - b. Establish a plan to protect personnel at high risk for complications of influenza (e.g., pregnant women, immunocompromised persons) by reassigning them to low-risk duties (e.g., non-influenza patient care, administrative duties) or placing them on furlough.
  - c. Promote annual influenza immunization for all employees and eligible family members.

G. Psychosocial Health Services and Support for Healthcare Workers

1. Identify mental health resources for counseling of healthcare personnel.
2. Include counseling measures to maximize professional performance and personal resilience by addressing grief management, exhaustion, anger, and fear; physical and mental health care for oneself and one's loved ones; and resolution of ethical dilemmas.
3. Develop strategies for healthcare workers' rest and recuperation needs.
4. Develop a strategy for housing and feeding healthcare personnel who might be needed on-site for prolonged periods.
5. Develop a strategy for accommodating and supporting staff that have child or eldercare responsibilities.

H. Assessing Local Hospital Needs and Capabilities

1. Assess preparations by local healthcare facilities and hospitals.
  - a. Meet with local hospital officials that are normally relied upon for inpatient care to assess what level of preparedness is in place and anticipated.
  - b. Hospital response plans should include:
    - (1.) Diagnostic capabilities and detection planning.
    - (2.) Infection control measures.
    - (3.) Plans on managing its impact on the facility and the staff.
    - (4.) Plans for handling case reporting, patient placement, healthcare worker illness surveillance.
  - c. Review inventories of supplies that will be in high demand during an influenza pandemic.

- d. Review procedures for the receipt, storage, and distribution of governmental stockpiles, should they exist.
  - e. Suggest tabletop simulations or other exercises to test response capabilities.
2. Assess the degree to which local hospitals will be used:
- a. For those critically ill with pandemic influenza.
  - b. For those seriously ill with other diseases or trauma.

#### I. Hospitalization Considerations and Planning Overseas

1. Before a pandemic:  
Determine the local hospital facilities that will be utilized for pandemic influenza treatment and report all evaluation information noted below in the Post Capabilities Database.
- a. RMOs and FSHPs should initially establish which advanced care hospitals in their areas have been selected by host country medical authorities to receive and isolate seriously ill suspected cases of PI. RMOs and FHSPs should make prior visits to these designated facilities to ascertain and plan for admissions, reviewing appropriate infection control and treatment capabilities.
  - c. Isolation with advanced ICU respiratory care capabilities should be reviewed.  
Planning should consider a pandemic scenario in which local hospitals may not have the surge capacity to continue admitting patients.
  - e. In evaluating PI planning by local designated PI hospitals, specifically query and report on the following:
    - (1.) Patients will be admitted either to single-patient rooms or to an area designated for cohorting PI patients. Because laboratory diagnosis may not be available, confirm that cohorting will be based on symptoms consistent with PI.
    - (2.) Because of the high patient volume anticipated during a pandemic, cohorting should be implemented early in the course of a local outbreak.
    - (3.) The number of personnel entering the cohorted area should be limited to those necessary for patient care and support.
    - (4.) Infection control policies and practices (hand hygiene, changing gloves between patient contact) in the hospital plan, to prevent nosocomial transmission.
    - (5.) Patient movement and transport outside the isolation area should be limited to that which is medically necessary. If transport or movement is necessary, patients should wear a surgical or procedure mask. If a mask cannot be tolerated (due to the patient's age or deteriorating respiratory status), apply the most practical measures to contain respiratory secretions. Patients should perform hand hygiene before leaving the room.
    - (6.) Visitors limited to persons who are necessary for the patient's emotional well-being and care.

- (7.) Instruction to visitors to wear surgical or procedure masks while in the patient's room
  - (8.) Instruction to visitors on hand-hygiene practices.
2. During a pandemic:
- a. Limit admission of influenza patients to those with severe complications of influenza who cannot be cared for outside the hospital setting.
  - b. During transport and movement to the hospital, patients should wear a surgical or procedure mask. If a mask cannot be tolerated (due to the patient's age or deteriorating respiratory status), apply the most practical measures to contain respiratory secretions. Patients should perform hand hygiene before leaving the health unit or home.
  - c. Family members accompanying patients with influenza-like illness to the hospital are assumed to have been exposed to influenza and should wear masks.

J. Prehospital Care (Emergency Medical Services)

Patients with severe PI or disease complications usually will require emergency transport to the hospital or designated facility or area for care. Healthcare personnel or those conducting the transport should be protected during transport as follows:

- 1. Follow standard and droplet precautions
- 2. Routinely utilize surgical/procedure masks for all drivers and attendants, both medical and non-medical.
- 3. If possible, place a procedure/surgical mask on the patient to contain droplets expelled during coughing. If not possible (would compromise respiratory status, difficult to wear), have the patient cover the mouth/nose with tissue when coughing, or use the most practical alternative to contain respiratory secretions.
- 4. Oxygen delivery with a non-rebreather facemask can be used to provide oxygen support during transport. If needed, positive-pressure ventilation should be performed using a resuscitation bag-valve mask.
- 5. Unless medically necessary to support life, aerosol-generating procedures (mechanical ventilation) should be avoided during Prehospital care.
- 6. Optimize vehicular ventilation to increase air exchange during transport.
- 7. When possible, use vehicles with separate driver/patient compartments to provide separate ventilation to each area.
- 8. Notify the receiving facility that a patient with possible PI is being transported.
- 9. Follow standard procedures for cleaning of the vehicle and reusable patient care equipment.

K. Medical Evacuation

- 1. Consider regional options for medical evacuation of those patients unable to be cared for locally:

2. Meet and discuss planning, policies and procedures with local airline medical representatives.
3. Meet and discuss planning, policies and procedures with local air ambulance medical evacuation providers.
4. Review procedures for making contact and requesting services of DOD medical air-evac assets.
5. Planning should include a scenario where neither commercial air ambulance nor DOD air-evac assets are available and borders and airports are closed.

L. Staffing

1. Estimate the minimum number and categories of personnel needed to care for a single patient or a small group of patients with influenza complications on a given day. DOS/MED recognizes that health units are not designed or intended to serve as critical care units and that even one critically ill influenza victim will likely require care beyond local health unit resources.
2. Determine how health units will meet staffing needs as the number of patients with pandemic influenza increases and/or healthcare and support personnel become ill or remain at home to care for ill family members. Consider the following options:
  - a. Assigning, after appropriate training, patient-care responsibilities to clinical administrators
  - b. Recruiting retired healthcare personnel
  - c. Using trainees (e.g., medical and nursing students)
  - d. Using, after appropriate training, patients' family members in an ancillary healthcare capacity
  - e. Collaborate with DOS/MED and Department of Defense regarding possible supplemental healthcare assets.
  - f. Increase cross-training of personnel to provide support for essential patient-care areas at times of severe staffing shortages
  - g. In consultation with post management, create a list of non-essential positions that can be re-assigned to support critical health unit services.
  - h. Consult with DOS/MED on plans for rapidly credentialing healthcare professionals during a pandemic.
  - i. In consultation with DOS/MED, identify insurance and liability issues related to the use of non-health unit staff.
  - j. Explore opportunities for recruiting healthcare personnel from other healthcare settings.

M. Consumable and Durable Supplies

1. Evaluate the existing system for tracking available medical supplies in the health unit to determine whether it can detect rapid consumption, including items that provide personal protection (e.g., gloves, masks). Improve the system as needed to respond to increased demands for resources during an influenza pandemic.

2. Stockpile sufficient consumable resources such as PPE for the duration of a pandemic wave (6-12 weeks).
3. Assess anticipated needs for consumable and durable resources, and determine a tripwire for ordering extra resources.
4. Anticipate needs for antibiotics to treat bacterial complications of influenza, and determine how supplies can be maintained during a pandemic.

N. Continuation of Essential Medical Services

1. Determine how essential medical services will be maintained for persons with chronic medical problems.
2. Develop a strategy for ensuring uninterrupted provision of medicines or suitable alternatives to patients who might not be able to (or should not) travel to the health unit or to local pharmacies.

O. Alternative Care Sites

If an influenza pandemic causes severe illness in large numbers of people, hospital capacity will likely be overwhelmed. In that case, communities will need to provide care in alternative sites (e.g., school gymnasiums, armories, convention centers). (Also see <http://www.ahrq.gov/research/altsites.htm>.) The selection of these sites should address the following infection control and patient care needs:

1. Bed capacity and spatial separation of patients
2. Facilities and supplies for hand hygiene
3. Lavatory and shower capacity for large numbers of patients
4. Food services (refrigeration, food handling, and preparation)
5. Medical services
6. Staffing for patient care and support services
7. PPE supplies
8. Cleaning/disinfection supplies
9. Environmental services (linen, laundry, waste)
10. Safety and Security

P. Mortuary Issues

To prepare for the possibility of mass fatalities during an influenza pandemic, health units, in consultation with CA, should:

1. Assess current capacity for refrigeration of deceased persons.
2. Discuss mass fatality plans with local health officials and medical examiners.
3. Work with local health officials and medical examiners to identify temporary morgue sites.
4. Determine the scope and volume of supplies (e.g., body bags) needed to handle an increased number of deceased persons.



*Table 1: Overseas Health Unit Pandemic Influenza Tripwires*

<b>Pandemic Influenza Level</b>	<b>Suggested Actions</b>
Interpandemic Period	<ul style="list-style-type: none"> <li>• Conduct planning</li> <li>• Conduct education/training</li> <li>• Conduct surveillance (Supplement 1)</li> </ul>
Pandemic Alert Period	<ul style="list-style-type: none"> <li>• Increase preparation; refine local plan</li> <li>• Conduct surveillance (Supplement 1)</li> </ul>
Pandemic Period	
<ul style="list-style-type: none"> <li>• Pandemic influenza outside host country</li> </ul>	<ul style="list-style-type: none"> <li>• Establish contact with key public health, healthcare, and community partners.</li> <li>• Implement surveillance for pandemic influenza (Supplement 1) in incoming patients.</li> <li>• Implement a system for early detection and treatment of healthcare personnel who might be infected with the pandemic strain of influenza.</li> <li>• Reinforce infection control procedures to prevent the spread of influenza (Supplement 4).</li> <li>• Accelerate staff training in accordance with the facility's pandemic influenza education and training plan.</li> </ul>
<ul style="list-style-type: none"> <li>• Pandemic influenza inside host country</li> </ul>	As above, plus:
	<ul style="list-style-type: none"> <li>• Implement activities to increase capacity, supplement staff, and provide supplies and equipment.</li> </ul>
	<ul style="list-style-type: none"> <li>• Maintain close contact with and among healthcare facilities and DOS/MED.</li> </ul>
	<ul style="list-style-type: none"> <li>• Post signs for respiratory hygiene/cough etiquette.</li> </ul>
	<ul style="list-style-type: none"> <li>• Maintain high index of suspicion that patients presenting with influenza-like illness could be infected with pandemic strain.</li> </ul>
	<ul style="list-style-type: none"> <li>• If pandemic strain is detected in a local patient, community transmission can be assumed and health unit will move to next level of response.</li> </ul>
<ul style="list-style-type: none"> <li>• Pandemic influenza in the local area</li> </ul>	<ul style="list-style-type: none"> <li>• Establish segregated waiting areas for persons with symptoms of influenza.</li> <li>• Implement phone triage to discourage unnecessary health unit visits.</li> <li>• Enforce respiratory hygiene/cough etiquette.</li> <li>• Limit points of entry to facility; assign clinical staff to entry screening at health unit.</li> </ul>

	Staffing practices:
	<ul style="list-style-type: none"> <li>• Cohort staff caring for influenza patients, if possible.</li> </ul>
	<ul style="list-style-type: none"> <li>• Consider assigning staff recovering from influenza to care for influenza patients.</li> </ul>
	<ul style="list-style-type: none"> <li>• Implement system for detecting and reporting signs and symptoms of influenza in staff reporting for duty.</li> </ul>
	<ul style="list-style-type: none"> <li>• Provide staff with antiviral prophylaxis, according to HHS and DOS/MED recommendations (See Supplement 7).</li> </ul>
<ul style="list-style-type: none"> <li>• Widespread transmission in community. As above plus; patient visits and hospitalizations at surge capacity.</li> </ul>	As above plus:
	Redirect personnel resources to support patient care (e.g., administrative clinical staff).
	Recruit community volunteers (e.g., retired nurses and physicians, non healthcare workers).
	Consider placing on administrative leave all non-essential personnel who cannot be reassigned to support critical healthcare or other U.S. mission services.

## **Figure 1: Preparedness Checklist**

### **1. Structure for planning and decision-making:**

☐ An internal, multidisciplinary planning committee for influenza preparedness has been created.

☐ A person has been designated as the influenza preparedness coordinator.  
(Insert name) \_\_\_\_\_

☐ Members of the planning committee include the following members (insert names)

Management \_\_\_\_\_  
Legal Counsel \_\_\_\_\_  
GSO \_\_\_\_\_  
Mental Health \_\_\_\_\_  
Human Resources \_\_\_\_\_  
RSO \_\_\_\_\_  
Information Technology \_\_\_\_\_  
Public Affairs \_\_\_\_\_  
Defense Attaché \_\_\_\_\_  
CDC attaché \_\_\_\_\_  
Other members \_\_\_\_\_  
Other members \_\_\_\_\_  
Other members \_\_\_\_\_  
Other members \_\_\_\_\_  
Other members \_\_\_\_\_  
Other members \_\_\_\_\_  
Other members \_\_\_\_\_

☐ A local healthcare agency, WHO or health ministry person has been identified as a committee liaison. (name) \_\_\_\_\_

☐ A linkage with local or regional emergency preparedness groups has been established.  
(name) \_\_\_\_\_

### **2. Development of a post specific written pandemic influenza plan.**

☐ A written plan has been completed or is in progress that includes the elements listed in #3 below.

☐ The plan specifies the circumstances under which the plan will be activated.

☐ The plan describes the organization structure that will be used to operationalize the plan.

☐ Responsibilities of key personnel related to executing the plan have been described.

☐ A simulation exercise has been developed to test the effectiveness of the plan.

☐ A simulation exercise has been performed. (Date performed \_\_\_\_\_)

### 3. Elements of an influenza pandemic plan.

☐

A surveillance plan has been developed.

☐

Syndromic surveillance for ILI has been established in the health unit.

☐

Criteria for distinguishing pandemic influenza are part of the syndromic surveillance plan.

☐

A system has been created for internal review of pandemic influenza activity in patients presenting to the health unit.

☐

A communication plan has been developed.

☐

Responsibility for external communication has been assigned.  
Person responsible for updating public health reporting to  
DOS/MED \_\_\_\_\_

Clinical spokesperson for the facility  
\_\_\_\_\_

Media spokesperson for the facility  
\_\_\_\_\_

☐

Key points of contact outside the facility have been identified.  
Local health ministry contact  
\_\_\_\_\_

Local WHO or CDC contact  
\_\_\_\_\_

Newspaper contact(s)  
\_\_\_\_\_

Radio contact(s) \_\_\_\_\_

Public official(s) \_\_\_\_\_

☐

A list of other healthcare facilities with which it will be necessary to maintain communication has been established.

☐

A meeting with local healthcare facilities has been held to discuss a communication strategy.

☐

A plan for updating key facility personnel on a daily basis has been established.  
The person(s) responsible for providing these updates are:  
\_\_\_\_\_  
\_\_\_\_\_

☐

A strategy for regularly updating health unit staff on the status of pandemic influenza, once detected, has been established.

☐

A plan for informing patients and the mission community about the level of pandemic influenza activity has been established.

☐

An education and training plan on pandemic influenza has been developed.

- ☐ Language and reading level- appropriate materials for educating all personnel about pandemic influenza and the facility's pandemic influenza plan have been identified.
- ☐ Means for accessing DOS/MED and federal web- based influenza training programs have been identified.
- ☐ A system for tracking which personnel have completed pandemic influenza training is in place.
- ☐ A plan is in place for rapidly training non-health unit staff brought in to provide patient care when the health unit reaches surge capacity.
- ☐ The following groups of healthcare personnel have received training on the facility's influenza plan:
  - ☐ Health unit nurses
  - ☐ Health unit laboratory personnel
  - ☐ Health unit clerical personnel
  - ☐ CERT and responder personnel
  - ☐ Other
- ☐ A triage plan has been developed.
  - ☐ A specific location has been identified for triage of patients with possible pandemic influenza.
  - ☐ The plan includes use of signage to direct and instruct patients with possible pandemic influenza on the triage process.
  - ☐ Patients with possible pandemic influenza will be physically separated from other patients seeking medical attention.
  - ☐ A system for phone triage of patients for purposes of prioritizing patients who require a medical evaluation has been developed.
  - ☐ Criteria for determining which patients need a medical evaluation are in place.
  - ☐ A method for tracking the admission to and discharge from local hospitals of patients with pandemic influenza has been developed.
- ☐ A facility access plan has been developed.

- ☐ Criteria and protocols for mission limiting public gatherings are in place.
- ☐ Criteria and protocols for closing the mission to outside visitors are in place.
- ☐ Criteria and protocols for limiting visitors to the health unit have been established.
- ☐ Security has had input into procedures for enforcing facility access controls.
- ☐ An occupational health plan has been developed.
- ☐ A system for rapidly delivering vaccine or antiviral prophylaxis to healthcare personnel has been developed.
- ☐ The system has been tested during a non- pandemic influenza season.
- ☐ A method for prioritizing healthcare personnel for receipt of vaccine or antiviral prophylaxis based on level of patient contact and personal risk for influenza complications has been established.
- ☐ A system for detecting symptomatic personnel before they report for duty has been developed.
- ☐ This system has been tested during a non- pandemic influenza period.
- ☐ A policy for managing healthcare personnel with symptoms of or documented pandemic influenza has been established. The policy considers:
- When personnel may return to work after having pandemic influenza
  - When personnel who are symptomatic but well enough to work, will be permitted to continue working
- ☐ A method for furloughing or altering the work locations of personnel who are at high risk for influenza complications (e. g., pregnant women, immunocompromised healthcare workers) has been developed.
- ☐ Mental health resources who will provide counseling to personnel during a pandemic have been identified.
- ☐ A strategy for housing healthcare personnel who may be needed on- site for prolonged periods of time is in place.
- ☐ A strategy for accommodating and supporting personnel who have child or elder care responsibilities has been developed.
- ☐ A vaccine and antiviral use plan has been developed.
- ☐ A priority list (based on DOS/MED guidance for use of vaccines and antivirals in a pandemic when in short supply) and estimated number of patients and healthcare personnel who would be targeted for influenza vaccination or antiviral prophylaxis has been developed.
- ☐ Number of prophylaxis first priority personnel \_\_\_\_\_
- ☐

Number of prophylaxis second priority personnel \_\_\_\_\_

☐ Number of remaining personnel \_\_\_\_\_

☐ A system for rapidly distributing vaccine and antivirals to patients has been developed.

☐ Issues related to surge capacity have been addressed.

☐ A plan is in place to address unmet staffing needs in the health unit.

☐ The minimum number and categories of personnel needed to care for a group of patients with pandemic influenza has been determined.

☐ Responsibility for assessing day- to- day clinical staffing needs during an influenza pandemic has been assigned.

☐ Persons responsible are: (names and/ or titles)

\_\_\_\_\_  
\_\_\_\_\_

☐ Confer with DOS/MED that DOS legal counsel has made sure that any insurance and other liability concerns have been resolved regarding non-medical volunteer and non-healthcare staff rendering patient care.

☐ A method for rapidly credentialing newly recruited personnel has been developed.

☐ Mutual AID Agreements (MAAs) and Memoranda of Understanding/ Agreement (MOU/ As) have been signed with other entities (e.g. CDC) that have agreed to share their staff, as needed.

☐ Anticipated durable and consumable resource needs have been determined

☐ A primary plan and contingency plan to address supply shortages has been developed

☐ Plans for obtaining limited resources have been discussed with local and regional planning and response groups.

## **Supplement Four: Infection Control**

### **Executive Summary**

This section details infection control strategies to delay influenza spread throughout communities to preserve medical response capabilities and continuation of operations. Personal protective equipment should be aimed at those who must be in contact with those who become ill. Respiratory hygiene and cough etiquette includes placing a surgical mask on a coughing patient. Surgical masks may be worn when entering a room containing a PI infected patient. N95 masks are reserved for procedures likely to generate small aerosolized infectious respiratory secretions. Patient care gloves should be worn for contact with patient secretions or blood. Gowns are reserved for procedures and situations in which clothing may come into contact with patient secretions or blood. Goggles are not necessary unless there is risk of spray or splatter of potentially infectious material. Hand hygiene is emphasized as the single most important practice to reduce transmission of infection in healthcare settings. Procedures for handling and disposing of solid waste, linen and laundry, dishes and eating utensils, patient-care equipment, and environmental disinfection are discussed.

Plans to reduce disease transmission need to be in place for inpatient as well as outpatient patient care processes. This includes DOS/MED health units, pre-hospital and hospital settings, and home settings. Planning should also include alternate medical care sites.

Infection control in the workplace and in community settings focuses on social distancing, respiratory hygiene/cough etiquette and hand hygiene to decrease exposure to others.

### **I. Rationale**

The primary strategies for preventing pandemic influenza (PI) are the same as those for seasonal influenza: vaccination, early detection and treatment with antiviral medications, and the use of infection control measures to prevent transmission during patient care. When a pandemic begins, a vaccine will not yet be widely available, and the supply of antiviral drugs will be limited. To limit transmission in overseas health units and other healthcare settings, we will rely heavily on the application of infection control measures. Influenza transmission requires close contact—via exposure to large droplets (droplet transmission), direct contact (contact transmission), or near-range exposure to aerosols (airborne transmission).

### **II. Influenza Transmission**

#### **Pathogenesis of influenza and implications for infection control**

The cellular pathogenesis of human influenza indicates that infection takes place principally within the respiratory tract. While conjunctivitis is a common manifestation of



systemic influenza infection, the ocular route of inoculation and infection has not been demonstrated for human influenza viruses. Certain avian species of influenza (H7N7) have been associated primarily with conjunctivitis in humans. Preventing direct and indirect inoculation of the respiratory tract with avian influenza viruses is important to prevent person-to-person transmission when caring for infectious patients.

A. Modes of transmission

1. Droplet

[http://www.cdc.gov/ncidod/dhqp/gl\\_isolation\\_standard.html](http://www.cdc.gov/ncidod/dhqp/gl_isolation_standard.html)

Droplet transmission occurs when large-particle droplets containing microorganisms contact the conjunctivae or the mucous membranes of the nose or mouth. Droplets are generated from the source person during coughing, sneezing, talking and during the performance of procedures such as suctioning and bronchoscopy. Transmission via large-particle droplets requires close contact between source and recipient persons. **Because droplets do not remain suspended in the air and travel only about 3 feet, special air handling and ventilation are not required to prevent droplet transmission.**

2. Contact

[http://www.cdc.gov/ncidod/dhqp/gl\\_isolation\\_contact.html](http://www.cdc.gov/ncidod/dhqp/gl_isolation_contact.html)

Direct-contact transmission involves skin-to-skin contact and physical transfer of microorganisms from an infected person, when performing patient-care activities like turning or bathing patients. Indirect-contact transmission involves contact with a contaminated intermediate object in an infected person's environment, such as a doorknob or handrail. Transmission via contaminated hands and fomites has been suggested in some studies, although insufficient data exists to determine the proportion of influenza transmission attributable to direct or indirect contact.

3. Airborne

[http://www.cdc.gov/ncidod/dhqp/gl\\_isolation\\_airborne.html](http://www.cdc.gov/ncidod/dhqp/gl_isolation_airborne.html)

Airborne transmission occurs by dissemination of either infected airborne droplet nuclei or small particles in the respirable size range. Microorganisms carried in this manner—such as *M. tuberculosis*—are dispersed over long distances by air currents and inhaled by susceptible individuals without face-to-face contact with infectious individuals. These organisms must be capable of sustaining infectivity, despite desiccation and environmental variation, to survive in the airborne state. Special air handling and ventilation systems (negative pressure rooms) are necessary to control airborne transmission. Laboratory studies in animals and observational studies of influenza outbreaks in humans on cruise ships and airplanes find a **limited importance for airborne transmission.**

B. There is no evidence that influenza transmission can occur across long distances (through ventilation systems) or through prolonged residence in air, as with tuberculosis. However, transmission may occur at shorter

distances through inhalation of small-particle aerosols (droplet nuclei), in shared air spaces with poor air circulation. Illness can be induced with lower virus titers when influenza virus is administered as a small droplet aerosol rather than as nasal droplets, suggesting that infection is most efficiently induced when virus is deposited in the lower rather than the upper respiratory tract. Aerosol-generating procedures (endotracheal intubation, suctioning, nebulizer treatment, bronchoscopy) could increase the dissemination of droplet nuclei thus additional precautions (N-95 respirator masks) for healthcare personnel who perform aerosol-generating procedures on influenza patients may be warranted.

C. Infection Control in Healthcare Settings in All Pandemic Phases

### III. Recommendations For Infection Control

A. Basic infection control principles

1. For preventing the spread in healthcare settings where pandemic influenza (PI) patients may seek or receive services by MED caregivers (out-patient facilities and homes):
  - a. Limit contact between infected and non-infected persons.
  - b. Isolate infected persons (confine patients to an area appropriate for the healthcare setting).
  - c. Limit contact between nonessential personnel (social visitors) and patients ill with PI. Promote spatial separation in common areas (sit or stand as far away as possible—at least 3 feet—from potentially infectious persons).
  - d. Protect caregivers of PI patients in healthcare settings from contact with the virus.
2. Persons who must be in contact should:
  - a. Wear a surgical mask for close contact as directed by HCWs.
  - b. Use contact and airborne precautions, when appropriate.
  - c. Wear gloves (gown if necessary) for contact with respiratory secretions.
  - d. Perform hand hygiene after contact with infectious patients.
  - e. Contain infectious respiratory secretions.
  - f. Instruct persons who have “flu-like” symptoms to use respiratory hygiene/cough etiquette.
  - g. Promote use of masks by symptomatic persons in waiting rooms, in physician offices or emergency departments and during emergency vehicle transport.

B. Management of infectious patients

1. Respiratory hygiene/cough etiquette  
Covering sneezes and coughs and/or placing a mask on a coughing patient to contain respiratory secretions limit the dispersal of respiratory droplets to reduce the opportunity for transmission. Masking may be difficult in some settings, e.g., pediatrics, in which case the emphasis will be on cough hygiene.

The elements of respiratory hygiene/cough etiquette include:

- a. Education of health unit staff and all in the U.S. mission community on the importance of containing respiratory secretions.
  - b. Language-appropriate signage with instructions to patients and accompanying family members or friends to report symptoms of a respiratory infection as directed.
  - c. Source control measures (covering the mouth/nose with a tissue when coughing and disposing of used tissues; providing masks for the coughing person).
  - d. Hand hygiene after contact with respiratory secretions.
  - e. Spatial separation, ideally >3 feet, of persons with respiratory infections in waiting areas.
2. Droplet precautions and patient placement
- Patients with known or suspected PI should be placed on droplet precautions for a minimum of 5 days from the onset of symptoms. Immunocompromised patients, who may shed virus for longer periods, should be placed on droplet precautions for the duration of their illness. Healthcare personnel should wear appropriate PPE. If the pandemic patient has diarrhea, contact precautions (gowns and gloves for all patient contact) should be added.

C. Infection control practices for healthcare personnel

1. Health unit personnel should avoid:
  - a. Touching their eyes, nose, or mouth with contaminated hands (gloved or ungloved). Carefully fit PPE before patient contact to avoid the need to make PPE adjustments and risk self-contamination during use. Careful removal of PPE is also important. (See also: <http://www.cdc.gov/ncidod/dhqp/ppe.html>)
  - b. Contaminating environmental surfaces such as door knobs and light switches.
2. Hand hygiene  
<http://www.cdc.gov/handhygiene/>  
**Hand hygiene has frequently been cited as the single most important practice to reduce the transmission of infectious agents in healthcare settings and is an essential element of standard precautions.** The term “hand hygiene” includes both hand washing with plain or antimicrobial soap and water and the use of alcohol-based products (gels, rinses, foams) containing an emollient; they do not require the use of water. If hands are visibly soiled or contaminated with respiratory secretions, wash hands with soap (either non-antimicrobial or antimicrobial) and water. In the absence of visible soiling of hands, approved alcohol-based products for hand disinfection are preferred over antimicrobial or plain soap and water because of their superior microbiocidal activity, reduced drying of the skin, and convenience. Always perform hand hygiene between patient contacts and after removing PPE. Ensure that resources to facilitate hand washing (sinks with warm and cold running water, plain or

antimicrobial soap, disposable paper towels) and hand disinfection (alcohol-based products) are readily accessible in areas in which patient care is provided.

3. Personal protective equipment (PPE)

[http://www.cdc.gov/ncidod/dhqp/gl\\_isolation.html](http://www.cdc.gov/ncidod/dhqp/gl_isolation.html)

PPE is used to prevent direct contact with the pandemic influenza virus. PPE that may be used to provide care includes surgical or procedure masks, as recommended for droplet precautions, and gloves and gowns, as recommended for standard precautions. Additional precautions may be indicated during the performance of aerosol-generating procedures.

a. Masks (surgical or procedure)

- (2.) HCWs should wear a mask when entering an exam room or other room containing a PI infected patient. A mask should be worn once and then discarded. If pandemic influenza patients are cohorted in a common area or in several rooms on a nursing unit, and multiple patients must be visited over a short time, it may be practical to wear one mask for the duration of the activity; however, other PPE (e.g., gloves, gown) must be removed between patients and hand hygiene performed.
- (3.) Change masks when they become moist.
- (4.) Do not leave masks dangling around the neck.
- (5.) Upon touching or discarding a used mask, perform hand hygiene.

b. Gloves

- (1.) A single pair of well-fitted, comfortable patient care gloves (made of latex, vinyl, nitrile, other synthetics) should be worn for contact with blood and body fluids, including during hand contact with respiratory secretions (providing oral care, handling soiled tissues, blood of pharyngeal specimen collection).
- (2.) Remove and dispose of gloves after use on a patient; do not wash gloves for subsequent reuse.
- (3.) Perform hand hygiene after glove removal.
- (4.) If gloves are in short supply, priorities for glove use should be established. In this circumstance, reserve gloves for situations of extensive patient or environmental contact with blood or body fluids, including during suctioning.
- (5.) Use other barriers (disposable paper towels, paper napkins) when there is only limited contact with a patient's respiratory secretions (to handle used tissues). Hand hygiene should be strongly reinforced in this situation.

c. Gowns

- (1) Most patient interactions do not necessitate the use of gowns. Procedures such as intubation and activities that involve holding the patient close (in pediatric settings) where clothing may come into contact with patient's blood,

body fluids or respiratory secretions are reasons to wear a gown when caring for PI patients.

- (2) A disposable appropriately sized single use gown made of synthetic fiber or of washable cloth may be used.
- (3) Gowns should be worn only once and then placed in a waste or laundry receptacle, as appropriate, and hand hygiene performed.
- (4) Priorities for gown usage should be established, especially if supplies are short. Alternatively, other coverings (patient gowns) could be used. Disposable aprons likely would not provide the desired protection to prevent contact with influenza virus.

d. Goggles or face shields

<http://www.cdc.gov/niosh/topics/eye/eye-infectious.html>

In general, wearing goggles or a face shield for routine contact with patients with PI is not necessary. If sprays or splatter of infectious material is likely (intubation, bronchoscopy or suction), goggles or a face shield should be worn as recommended for standard precautions.

e. Special situations: PPE for aerosol-generating procedures

For performance of procedures that may generate increased small-particle aerosols of respiratory secretions (endotracheal intubation, nebulizer treatment, bronchoscopy, suctioning), healthcare personnel should wear gloves, gown, face/eye protection, and a N95 respirator. Respirators should be used within the context of a respiratory protection program that includes fit-testing, medical clearance, and training. If possible, an airborne isolation room should be used when conducting aerosol-generating procedures. Early in a pandemic, the combined use of airborne and contact precautions, in addition to standard precautions may be implemented until a diagnosis is established.

4. Disposal of solid waste

If waste might be contaminated with a PI virus:

- a. Contain and dispose of contaminated medical and non-medical waste in the following manner and dispose in accordance with local requirements at the health unit location:
  - (1) Dry solid waste (e.g., used gloves, dressings), should be collected in biohazard bags.
  - (2) Waste that is saturated with blood or body fluids should be collected in leak-proof biohazard bags or containers.
  - (3) Sharp items such as used needles or scalpel blades should be collected in puncture-resistant sharps containers.
  - (4) Suctioned fluids and secretions should be stored in sealed containers for disposal. Handling that might create splashes or aerosols during transport should be avoided.

- (5) Suction device exhaust should not be vented into the room without HEPA or equivalent filtration. Portable suction devices should be fitted with in-line HEPA or equivalent filters.
  - (6) Excretions (feces, urine) may be carefully poured down a toilet.
- b. Discard as routine waste used patient-care supplies that are not likely to be contaminated.
- c. Wear disposable gloves when handling waste. Perform hand hygiene after removal of gloves.
- 5. Linen and laundry  
[http://www.cdc.gov/ncidod/dhqp/gl\\_environinfection.html](http://www.cdc.gov/ncidod/dhqp/gl_environinfection.html)  
If linen and laundry might be contaminated with respiratory secretions from patients with PI:
  - a. Place soiled linen directly into a securely and tightly closed laundry bag in the health unit exam room or patient room for transport.
  - b. Wear gloves and gown when directly handling soiled linen and laundry (bedding, towels, personal clothing) and do not shake soiled linen and laundry to avoid disease transmission or contamination of the environment.
  - c. Wear gloves for transporting bagged linen and laundry
  - d. Perform hand hygiene after removing gloves that have been in contact with soiled linen and laundry.
    - o Wash and dry linen according to routine standards and procedures.
- 6. Dishes and eating utensils  
[http://www.cdc.gov/ncidod/dhqp/gl\\_environinfection.html](http://www.cdc.gov/ncidod/dhqp/gl_environinfection.html)  
When handling dishes and eating utensils used by a patient with known or possible PI:
  - a. Wash reusable dishes and utensils in a dishwasher with recommended water temperature.
  - b. Disposable dishes and utensils (used in an alternative care site set-up for large numbers of patients) should be discarded with other general waste.
  - c. Wear gloves when handling patient trays, dishes, and utensils.
- 7. Patient-care equipment  
Follow standard practices for handling and reprocessing used patient-care equipment, including medical devices:
  - a. Wear gloves when handling and transporting used patient-care equipment.
  - b. Wipe heavily soiled equipment with an EPA-approved disinfectant before removing it from the patient's room. Follow recommendations for cleaning, disinfection, or sterilization of reusable patient-care equipment.
  - c. Wipe external surfaces of portable equipment for performing x-rays and other procedures in the patient's room with an EPA-

approved hospital disinfectant upon removal from the patient's room.

8. Environmental cleaning and disinfection

a. Environmental cleaning and disinfection for pandemic influenza follows the same general principles used in healthcare settings.

- (1) Wear gloves for environmental cleaning and wear a surgical/procedure mask for droplet precautions. Gowns are not necessary for routine cleaning of an influenza patient's room or health unit PI evaluation area.
- (2) Keep patient areas free of unnecessary supplies and equipment to facilitate daily cleaning.
- (3) Use any EPA-registered detergent-disinfectant, following manufacturer's directions for concentration, contact time, and care in handling.
- (4) Regularly clean patient-occupied rooms, giving special attention to frequently touched surfaces (bedside tables, TV controls, telephones, lavatory surfaces, doorknobs, commodes, ventilator surfaces) in addition to floors and other horizontal surfaces.
- (5) Clean and disinfect spills of blood and body fluids in accordance with current recommendations for Isolation Precautions:

[http://www.cdc.gov/ncidod/dhqp/gl\\_isolation.html](http://www.cdc.gov/ncidod/dhqp/gl_isolation.html)

b. Cleaning and disinfection after patient discharge or transfer:

- (1) Follow standard procedures for post-recovery cleaning of an isolation room.
- (2) Clean and disinfect all surfaces that were in contact with the patient or might have become contaminated during patient care. No special treatment is necessary for window curtains, ceilings, and walls unless there is evidence of visible soiling.
- (3) Do not spray occupied or unoccupied rooms with disinfectant. This is a potentially dangerous practice that has no proven disease control benefit.

9. Postmortem care

Follow standard mission practices for care of the deceased. Practices should include standard precautions for contact with blood and body fluids (gloves, gowns and surgical masks).

10. Laboratory specimens and practices

Follow standard laboratory practices for the collection, handling, and processing of laboratory specimens (gloves, masks and gowns dependent upon collection techniques).

D. Occupational Health Issues

DOS/MED and U.S. mission healthcare personnel are at risk for pandemic influenza through community and healthcare-related exposures

1. Implement a system to educate healthcare and family caregivers about occupational health issues related to PI.

2. Screen all personnel for influenza-like symptoms and fever before they come on duty. Symptomatic personnel should be sent home until they are physically ready to return to duty.
3. Healthcare personnel who have recovered from PI, even if given oseltamivir, should have developed antibody against future infection with the same virus, thus should be prioritized for the care of patients with active PI and its complications. These workers also should care for patients who are at risk for serious complications from influenza (immunocompromised patients and neonates).
4. Health unit personnel at high risk for complications of PI (pregnant women, immunocompromised) should be informed about their medical risk and offered an alternate work assignment away from influenza patient care, or placed on administrative leave until PI has abated in the community.

E. Healthcare Setting-Specific Guidance

1. U.S. mission overseas health units and DOS/MED domestic occupational health units

When patients with non-emergency symptoms of an influenza-like illness seek care in the mission health facility, infection control measures should be in place that will help prevent exposure among other patients and clinical and non-clinical office staff.

a. Detection of patients with possible pandemic influenza:

- (1.) Post visual alerts (in appropriate languages) at the entrance to health units instructing persons with respiratory symptoms to inform reception and healthcare personnel when they first register for care.
- (2.) Practice respiratory hygiene/cough etiquette.  
([www.cdc.gov/flu/professionals/infectioncontrol/resphgiene.htm](http://www.cdc.gov/flu/professionals/infectioncontrol/resphgiene.htm))
- (3.) Triage patients calling for medical appointments for influenza symptoms:
  - o Discourage unnecessary visits to health units.
  - o Instruct symptomatic patients on infection control measures to limit transmission in the home and when traveling to necessary medical appointments.

b. "Source control" measures:

- (1.) Post signs that promote cough etiquette in common areas (elevators, waiting areas, cafeterias, lavatories) in all DOS buildings where they can serve as reminders to all persons in the healthcare facility. Signs should instruct persons to:
  - o Cover the nose/mouth when coughing or sneezing.
  - o Use tissues to contain respiratory secretions.
  - o Dispose of tissues in the nearest waste receptacle after use.
- (2.) Perform hand hygiene after contact with respiratory secretions.



- (3.) Facilitate adherence to respiratory hygiene/cough etiquette. Ensure the availability of materials in waiting areas for patients and visitors.
- (4.) Provide tissues and no-touch receptacles (waste containers with pedal-operated lid or uncovered waste container) for used tissue disposal.
- (5.) Provide conveniently located dispensers of alcohol-based hand rub.
- (6.) Provide soap and disposable towels for hand washing where sinks are available.
- (7.) Promote the use of procedure/surgical masks and spatial separation by symptomatic persons.
- c. Patient placement:
  - (1.) Where possible, designate separate waiting areas for patients symptomatic for PI.
  - (2.) Place signs indicating the separate waiting areas.
  - (3.) Place symptomatic patients in an evaluation room as soon as possible to limit their time in common waiting area
  - (4.) Other infection control strategies that may be utilized include:
    - o Screening patients for influenza-like illness by phone or before coming into the facility and rescheduling appointments for those whose care is non-emergency.
    - o Canceling all non-emergency services when there is pandemic influenza in the community

F. Care of pandemic influenza patients in the home  
 Most patients with pandemic influenza will be able to remain at home during the course of their illness and can be cared for by family members or others in the household. Anyone residing in a household with an influenza patient during the incubation period and illness is at risk for developing influenza. A key objective is to limit transmission of PI within and outside the home. When a household member provides care, basic infection control precautions should be emphasized (segregating the ill patient, hand hygiene). Infection within the household may be minimized if a primary caregiver is designated, ideally someone who is not at increased risk of severe influenza disease. Although no studies have assessed the use of masks at home to decrease the spread of infection, use of surgical/procedure masks by the patient and/or caregiver during interactions may be of benefit.

#### G. Management

- 1. Management of influenza patients
  - a. Physically separate the patient from non-ill persons in the home.
  - b. Patients should not leave the home during the period when they are most infectious to others (5 days after onset of symptoms). When movement outside the home is necessary (for medical care), the

patient should follow cough etiquette (cover the mouth and nose when coughing and sneezing) and wear procedure/surgical masks.

2. Management of other persons in the home
  - a. Persons not exposed to PI who are not essential for patient care or support should not enter the home of actively ill persons with PI.
  - b. If unexposed persons must enter the home, they should avoid close contact with the patient.
  - c. Persons living in the home with the PI patient should limit contact with the patient and consider designating one person as the primary care provider.
  - d. Household members should monitor themselves closely for the development of influenza symptoms and contact a telephone hotline or medical care provider if symptoms occur.
3. Infection control measures in the home
  - a. All persons in the household should carefully follow recommendations for hand hygiene (hand washing with soap and water or use of an alcohol-based hand rub) after contact with the patient or the environment in which care is provided.
  - b. Studies have not assessed the use of masks at home to decrease the spread of infection; use of surgical/procedure masks by the patient during interactions may be of benefit. Surgical masks may be utilized by the caregiver as directed by HCWs. Wearing of gloves and gowns is not recommended for household members providing care in the home.
  - c. Soiled dishes and eating utensils should be washed either in a dishwasher or by hand with warm water and soap. Separation of eating utensils for use by a patient with influenza is not necessary.
  - d. Laundry can be washed in a standard washing machine with warm or cold water and detergent along with other household laundry. Care should be used when handling soiled laundry (avoid “hugging” the laundry) to avoid contamination. Hand hygiene should be performed after handling soiled laundry.
  - e. Tissues used by the ill patient should be placed in a bag and disposed of with other household waste. Consider placing a bag for this purpose at the bedside.
  - f. Normal cleaning of environmental surfaces in the home should be followed.

#### H. Care of pandemic influenza patients at alternative sites

If an influenza pandemic results in severe illness that overwhelms the capacity of existing healthcare resources, it may become necessary to provide care at alternative sites (schools, auditoriums, conference centers, hotels). Existing “all-hazard” plans should have likely identified designated sites for this purpose. The same principles of infection control apply in these settings as in other healthcare settings. Careful planning is necessary to ensure that resources are available and procedures are in place to adhere to the key principles of infection control.

#### IV. Infection Control in the Workplace

In workplaces, infection control for pandemic influenza should focus on:

- A. Keeping sick workers away while they are infectious.
- B. Promoting respiratory hygiene/cough etiquette and hand hygiene.
- C. The benefit of wearing masks in these settings has not been established.
- D. DOS managers should ensure that materials for respiratory hygiene/cough etiquette (tissues and receptacles for their disposal) and hand hygiene are available. Educational messages and infection control guidance for PI should be posted and distributed.
- E. Health unit personnel should evaluate in the health unit or telephonically employees with respiratory symptoms before these employees are permitted back into the workplace.

#### V. Recommendations for Infection Control in Community Settings

Infection control in the community should focus on “social distancing” and promoting respiratory hygiene/cough etiquette and hand hygiene to decrease exposure to others. This could include the use of masks by persons with respiratory symptoms and although the use of masks in community settings has not been demonstrated to decrease infections during a community outbreak, persons may choose to wear a mask along with cough etiquette, hand hygiene, and avoiding public gatherings. Mask use may be important for persons at high risk for complications of influenza. Public education should be provided on how to use masks appropriately. Persons at high risk for complications of influenza should try to avoid public gatherings (movies, religious services, public meetings, stores, sporting events) when PI is in the community. Others should shop for these persons.

## **Supplement Five: Clinical Guidelines**

### Executive Summary

This supplement addresses clinical guidelines for screening, assessment, and management of patients during the Inter-pandemic and Pandemic phases.

The goal is to quickly identify potential PI patients so that they may be:

- a) Evaluated, treated, and monitored as best as possible at your overseas location
- b) Isolated from other persons who are non-immune to the PI virus, thereby limiting spread of the virus

### I. Rationale

Health Unit staff must be prepared to detect novel or pandemic influenza in the Mission community. Identification and isolation of cases may help slow the spread of influenza within a U.S. mission. Rapid diagnosis and initiation of treatment can avert potentially severe complications. Detection is complicated, however, by the lack of specific clinical findings or laboratory tests that can rapidly distinguish novel/pandemic strains from seasonal influenza. In addition, neither the clinical characteristics of a novel/pandemic influenza virus strain nor the groups at highest risk for complications can necessarily be defined beforehand. Therefore, HU clinicians face significant challenges in: 1) quickly identifying and triaging cases, 2) containing the spread of infection, 3) beginning an efficient and comprehensive workup, 4) initiating antiviral and other supportive therapy, and 5) anticipating clinical complications.

### II. Overview

During the Interpandemic and Pandemic Alert Periods, early recognition of illness caused by a novel influenza A virus will rely on a combination of clinical and epidemiological features. During the Pandemic Period (in a setting of high community prevalence), diagnosis will likely be more clinically oriented because the likelihood will be high that any severe febrile respiratory illness is pandemic influenza. The management of influenza is based primarily on sound clinical judgment, an assessment of locally available resources, such as rapid diagnostics, antiviral drugs, and usable hospital beds. Early antiviral therapy may shorten the duration of illness due to seasonal influenza and has demonstrated similar effects on novel influenza viruses grown in mice and in the lab. Clinical management must also address supportive care and management of influenza-related complications.

### III. The Interpandemic and Pandemic Alert Periods

To limit the need to evaluate an overwhelming number of patients, the screening criteria should be specific, relying on a combination of clinical and epidemiological features. Human cases of highly pathogenic avian influenza (HPAI) are expected to be quite rare in this time frame; laboratory diagnosis will most likely be sought for those with a *severe*

*respiratory illness*, such as pneumonia. The main features of clinical management during the interpandemic and pandemic alert periods are outlined in Figure 1.

A. Criteria for Evaluation of Patients with Possible Novel Influenza

1. Clinical criteria:

The criteria for diagnosing either novel or early pandemic influenza will depend greatly on the epidemiological picture in the locality or region.

The full *clinical* criteria are:

**Fever** (temperature > 38°C) **PLUS one** of the following:

**Sore Throat,**

**Cough**

**Dyspnea.**

Given the large number of influenza-like illnesses that clinicians encounter during a typical flu season, laboratory evaluation at this pre-pandemic time should be done only for patients who meet --or are suspicious for-- the epidemiological criteria (e.g., direct contact with ill poultry in an affected area, or close contact with a known or suspected human case of novel influenza.).

2. Epidemiological criteria

The incubation period for novel types of influenza is unknown and might be longer than the 1 to 4 days for seasonal influenza. Therefore, the maximum interval between potential exposure to novel virus and symptom onset has been set conservatively at 10 days.

a. Exposure risks

b. Travel risks

Updated listings of areas affected by avian influenza A (H5N1) and other current/recent novel strains are provided on the websites of:

(1.) The OIE - [http://www.oie.int/eng/en\\_index.htm](http://www.oie.int/eng/en_index.htm)

(2.) The WHO - [http://www.who.int/csr/disease/avian\\_influenza/en/index.html](http://www.who.int/csr/disease/avian_influenza/en/index.html)

(3.) CDC <http://www.cdc.gov/flu/avian/>

Persons have a travel risk if they have: 1) recently visited or lived in an area affected by highly pathogenic avian influenza A outbreaks in domestic poultry or where a human case of novel influenza has been confirmed, *and either* 2) had *direct contact* with poultry, *or* 3) had *close contact* with a person with confirmed or suspected novel influenza.

*Direct contact* with poultry is defined as: 1) touching birds (well-appearing, sick, or dead), or 2) touching poultry feces or surfaces contaminated with feces, or 3) consuming uncooked poultry products (including blood) in an affected area. *Close contact* with a person from an infected area with confirmed or suspected novel influenza is defined as being within 3 feet (1 meter) of that person during their illness.

c. Occupational risks

Persons at occupational risk for infection with a novel strain of influenza include persons who work on farms or in live poultry markets or who process or handle poultry infected with known or suspected avian influenza viruses, workers in laboratories that contain live animal or novel influenza viruses, and healthcare workers in direct contact with a suspected or confirmed novel influenza case.

**B. Initial Management of Patients Who Meet the Criteria for Possible Novel Influenza**

When a patient meets both the clinical and epidemiological criteria for a suspected case of novel influenza, healthcare personnel should initiate the following activities:

1. Implement infection control precautions.
  - a. Respiratory hygiene/cough etiquette and surgical mask for the patient
  - b. Droplet precautions for suspect patients for a minimum of 14 days (5 days for the pandemic period)
  - c. Standard Precautions if indicated (see supplement 4, Infection Control)
  - d. Isolate patients if possible and limit their movement
2. Notify DOS/MED and the local health authorities in your country.
3. Obtain clinical specimens for novel influenza A viral testing (see Supplement 2). At U.S missions with a developed public health infrastructure, public health authorities will likely direct patient testing. For more remote posts, testing will likely involve obtaining samples of respiratory secretions (e.g. throat swab, tracheal aspirate if intubated, nasal washings, gargle specimen) that will need to be transported to an appropriate lab facility.
4. Evaluate for possible alternative diagnoses. Depending upon post diagnostic capabilities, obtain: pulse oximetry readings; CXR; CBC with diff; serum chemistry panel; blood culture, sputum gram stain & culture; and, if available, viral & bacterial respiratory pathogen testing done on urine, blood, and pleural fluid.
5. Decide on inpatient or outpatient management. If the patient is not severely ill and if adequate precautions can be taken at home to prevent the potential spread of infection (see Supplement 4: Infection Control), outpatient management may be the optimal choice in most overseas locations. Home care instructions should emphasize controlling the spread of infection (see Supplement 4) and also give specific advice for patient care: fever control (NO aspirin to pts < 18 yrs of age!), hydration, nutrition, pain relief, and signs of deterioration and what to do about it.
6. Initiate antiviral treatment as soon as possible (see Supplement 7: Antiviral Distribution and Use).

7. Rapidly identify and treat complications of influenza. Especially watch persons most susceptible to complications of influenza: the very young, the elderly, the immunocompromised, and those with chronic pulmonary or cardiac illnesses. Complications could include:
  - a. Pneumonia caused by the influenza virus
  - b. Pneumonia caused by secondary bacterial infection (up to 10% of patients--estimate)
    - Strep pneumonia
      - Consider, as resources permit, administration of pneumococcal vaccine to those at particular risk and over age 50:
      - o Polysaccharide vaccine:  
<http://www.cdc.gov/nip/publications/VIS/vis-ppv.pdf>
      - o Conjugate vaccine:  
<http://www.cdc.gov/nip/publications/VIS/vis-PneumoConjugate.pdf>
    - Haemophilis influenza
    - Group A Strep
    - Staph aureus
  - c. Other viral superimposed infections, e.g. adenovirus.
  - d. Worsening of underlying conditions.  
For guidelines on managing post-influenza pneumonia, see Appendix One below.

#### C. Management of Patients Who Test Positive for Seasonal Influenza

Many suspected novel influenza cases may be found to have seasonal human influenza, particularly during the winter season. It should be recognized that human influenza viruses circulate among people worldwide, including areas with poultry outbreaks of avian influenza A viruses during non-seasonal influenza activity for the United States. For patients with confirmed seasonal influenza, maintain standard and droplet precautions, and discontinue antiviral treatment unless they are in a group at high risk for complications. A high incidence of influenza A resistance to Amantadine and Rimantadine has been reported for seasonal influenza worldwide. These drugs are expected to have limited use for treatment of any type of influenza unless the PI virus is found to be susceptible.

#### D. Management of Patients Who Test Negative for Novel Influenza

The sensitivity of the currently available tests for detecting novel influenza viruses in clinical specimens has not been thoroughly evaluated with a full range of specimen types. Consequently, false-negative test results may occur. Therefore, if test results are negative but the clinical and epidemiological suspicion remains high, continuing antiviral treatment with oseltamivir and isolation procedures should be considered. Test results might be negative for influenza viruses for several reasons. Some patients might have an alternate etiology to explain their illness. The work-up for febrile respiratory illnesses described below should evaluate for the most common alternative causes. A certain number of truly

infected cases might also test false negative due to specimen collection conditions, to viral shedding that is not detectable, or to insensitivity of the test. Interpretation of negative test results should be tailored to the individual patient in consultation with local trusted infectious disease specialists, as well as with DOS/MED. In hospitalized patients who test negative for novel influenza but have no alternative diagnosis established, novel-influenza-directed management should be continued if clinical suspicion is high and there is a strong epidemiological link to exposure to novel influenza. When influenza tests are negative and an alternative diagnosis is established, isolation precautions and antiviral drug therapy for novel influenza may be discontinued based on the clinician's assessment. There should be strong consideration for discontinuing therapy in the absence of a strong epidemiological link, if the alternative diagnosis is made using a test with a high positive-predictive value, and if the clinical manifestations are explained by the alternative diagnosis.

#### IV. The Pandemic Period

During the Pandemic Period, the primary goal of rapid detection is to appropriately identify and triage cases of pandemic influenza. During this period, U.S. mission health units, local emergency departments and hospitals might be overwhelmed with suspected cases, restricting the time and laboratory resources available for evaluation. In addition, if the pandemic influenza virus exhibits transmission characteristics similar to those of seasonal influenza viruses, illnesses will likely spread throughout the community too rapidly to allow the identification of obvious exposures or contacts. Evaluation will therefore focus predominantly on clinical and basic laboratory findings, with less emphasis on epidemiological and laboratory diagnostic testing with RT-PCR and other more sophisticated and accurate testing (which may be in short supply). Nevertheless, clinicians in communities without pandemic influenza activity might consider asking patients about recent travel from a community with pandemic influenza activity or close contact with a suspected or confirmed pandemic influenza case. The main features of clinical management during the Pandemic Period are outlined in Figure 2.

##### A. Criteria for Evaluation of Patients with Possible Pandemic Influenza

1. Clinical criteria for PI remain the same as used for novel influenza strains. The difference will be the context, i.e., a WHO-declared phase 6 pandemic. Although past influenza pandemics have most frequently resulted in respiratory illness, the next pandemic influenza virus strain might present with a different clinical syndrome. During a pandemic, updates on other clinical presentations will be provided at: [www.pandemicflu.gov](http://www.pandemicflu.gov) and [www.cdc.gov/flu/](http://www.cdc.gov/flu/). Recommendations for general evaluation of patients with influenza-like illness are the same as those provided for novel influenza strains.

Exceptions to the clinical criteria should be noted. For persons with a high risk of exposure to a pandemic influenza virus (e.g., healthcare workers), epidemiological evidence might be enough to initiate further measures, even if clinical criteria are not fully met. In these persons, early signs and symptoms—such as rhinorrhea, conjunctivitis, chills,



rigors, myalgia, headache, and diarrhea—in addition to cough or sore throat, may be used to fulfill the clinical criteria for evaluation. Young children, elderly patients, patients in long-term care facilities, and persons with underlying chronic illnesses might not have typical influenza-like symptoms such as fever. In the context of PI, novel influenza should be considered with almost any change in health status, even in the absence of typical clinical features. Conjunctivitis has been reported in patients with influenza A (H7N7) and (H7N3) infections. In young children, gastrointestinal manifestations such as vomiting and diarrhea might be present. Infants may present with fever or apnea alone, without other respiratory symptoms, and should be evaluated if there is an otherwise increased suspicion of novel influenza.

2. Epidemiological criteria

During the Pandemic Period, an exposure history will be marginally useful for clinical management when disease is widespread in a community. In addition, there will be a relatively high likelihood that any case of influenza like illness (ILI) during that time period will be pandemic influenza. Once pandemic influenza has arrived in a particular locality, clinical criteria will be sufficient for classifying the patient as a suspected pandemic influenza case.

B. Initial Management of Patients Who Meet the Criteria for Pandemic Influenza

When a patient meets the criteria for a suspected case of pandemic influenza, healthcare personnel should initiate the same activities listed above under the category of treating those infected with novel influenza strains.

C. Clinical Management of Pandemic Influenza Patients

See Supplement Seven for current antiviral information and treatment strategies. In addition to use of antivirals, clinical management of severe influenza should address supportive care and the rapid identification and treatment of secondary complications. During the Pandemic Period, CDC may request virus isolates from persons who fail treatment or antiviral prophylaxis, as these strains may more likely be drug resistant. In addition, randomly collected isolates will be tested for resistance to establish nationwide rates (see Supplement 1). Whether U.S. mission overseas health units will participate in these efforts has not yet been decided. Children aged <18 years with suspected or confirmed pandemic influenza should not be treated with aspirin or other salicylate-containing products because of an increased risk of Reye syndrome (characterized by acute encephalopathy and liver failure) in this age group. The major clinical presentations and complications related to seasonal human influenza occur more commonly in persons with certain underlying medical conditions, such as chronic respiratory or cardiovascular disease and extremes of age. Limited data are available on risk factors and complications related to

infection with novel influenza viruses, and these may change as individual strains evolve.

## Appendix One: Guidelines for Management of Community-Acquired Pneumonia, Including Post-Influenza Community-Acquired Pneumonia

Post-influenza bacterial community-acquired pneumonia will likely be a common complication during the next pandemic and might affect 10% of persons with pandemic influenza, based on data from previous influenza pandemics. Many feel that pandemic influenza will affect about 15%–35% of the U.S. population. Post-influenza bacterial community-acquired pneumonia (CAP) often presents as a return of fever, along with a productive cough and pleuritic chest pain, after an initial improvement in influenza symptoms over the first few days. Findings include lobar consolidation on chest x-ray and, in adults, sputum smear positive for leukocytes and bacteria. As with other bacterial infections, leukocytosis with increased immature forms may be present, but this finding is neither sensitive nor specific. The most common etiologies of post-influenza bacterial pneumonia are *Streptococcus pneumoniae*, *Staphylococcus aureus*, group A *Streptococcus*, and *Haemophilus influenzae*. Primary viral pneumonia, with abrupt onset and rapid progression, is more common than bacterial pneumonia in children, yet rare in adults. Physical and radiological findings in viral pneumonia are consistent with interstitial and/or alveolar disease and include bilateral inspiratory crackles and diffuse infiltrates. Mixed viral/bacterial pneumonia is slightly more common than primary viral pneumonia, but they are often indistinguishable. Bacterial pathogens in mixed infections are similar to those found in secondary bacterial pneumonias. Droplet and standard precautions are currently recommended for community-acquired pneumonia of bacterial etiology.

Secondary bacterial pneumonia following influenza virus infection will be difficult to distinguish from CAP that is not preceded by influenza. Current guidelines for the treatment of adult CAP during the Interpandemic Period de-emphasize the use of diagnostic testing for pathogen-directed treatment and favor empiric therapy with safe and effective broad-spectrum antibacterials, especially extended-spectrum macrolides and fluoroquinolones. However, these antibacterials will likely be in short supply during a pandemic.

### Prevention

Efforts to maximize vaccination coverage against *Streptococcus pneumoniae* are an important component of post-influenza bacterial CAP prevention during the Interpandemic, Pandemic Alert, and Pandemic Periods. Current guidelines on the use of the 23-valent-pneumococcal-polysaccharide vaccine among adults and the 7-valent pneumococcal conjugate vaccine among children are available (see links above). DOS/MED in consultation with the CDC and NIH plans to utilize pneumococcal vaccine for all adults over age 50, those with pulmonary and/or cardiac disease, as well as those immunocompromised.

Site of care: inpatient versus outpatient

## Adults

IDSA-ATS draft guidelines recommend the use of severity scores, such as the Pneumonia PORT Severity Index (PSI) and the CURB-65 system, to determine which patients can be safely treated as outpatients (Tables 2–5). The use of these or other similar systems could be extremely important during the next pandemic, as hospital beds will be in short supply.

However, these systems should be used to supplement rather than replace the judgment of the individual clinician.

TABLE 1. PNEUMONIA PORT SEVERITY INDEX (PSI) CALCULATION	
Patient Characteristics	Points Assigned
Age	
Male	Number of years
Female	Number of years minus ten
Nursing home resident	+10
Comorbid illness	
Neoplastic disease	+30
Liver disease	+20
Congestive heart failure	+10
Cerebrovascular disease	+10
Renal disease	+10
Physical exam finding	
Altered mental status	+20
Respiratory rate >30 breaths/minute	+20
Systolic blood pressure < 90	+20
Temperature < 35°C or >40°C	+15
Pulse > 125 beats/minute	+10
Laboratory and/or radiological findings	
Arterial pH <7.35	+30
BUN > 30 mg/dl	+20
Sodium < 130 mmol/l	+20
Glucose > 250 mg/dl	+10
Hematocrit < 30%	+10
Hypoxemia	+10
< 90% by pulse oximetry OR	
< 60mm Hg by arterial blood gas	
Pleural effusion on baseline CXR	+10

TABLE 2. PNEUMONIA	SEVERITY INDEX RISK	CLASSIFICATION
PSI Risk Class	Characteristics and points	Recommended site of care
I	Age > 50yrs, no comorbid conditions, normal vitals, normal mental status	Outpatient
II	<70	Outpatient
III	71-90	Outpatient/brief inpatient
IV	91-130	Inpatient
V	>130	Inpatient

<b>TABLE 3. CURB-65 SCORING SYSTEM</b>	
<b>Characteristic</b>	<b>Points</b>
Confusion (based on specific mental status exam or disoriented to person, place, time.	+1
BUN > 20 mg/dl	+1
Respiratory rate > 30 breaths per minute	+1
BP: Systolic < 90 or Diastolic < 60	+1
Age > 65 yrs	+1

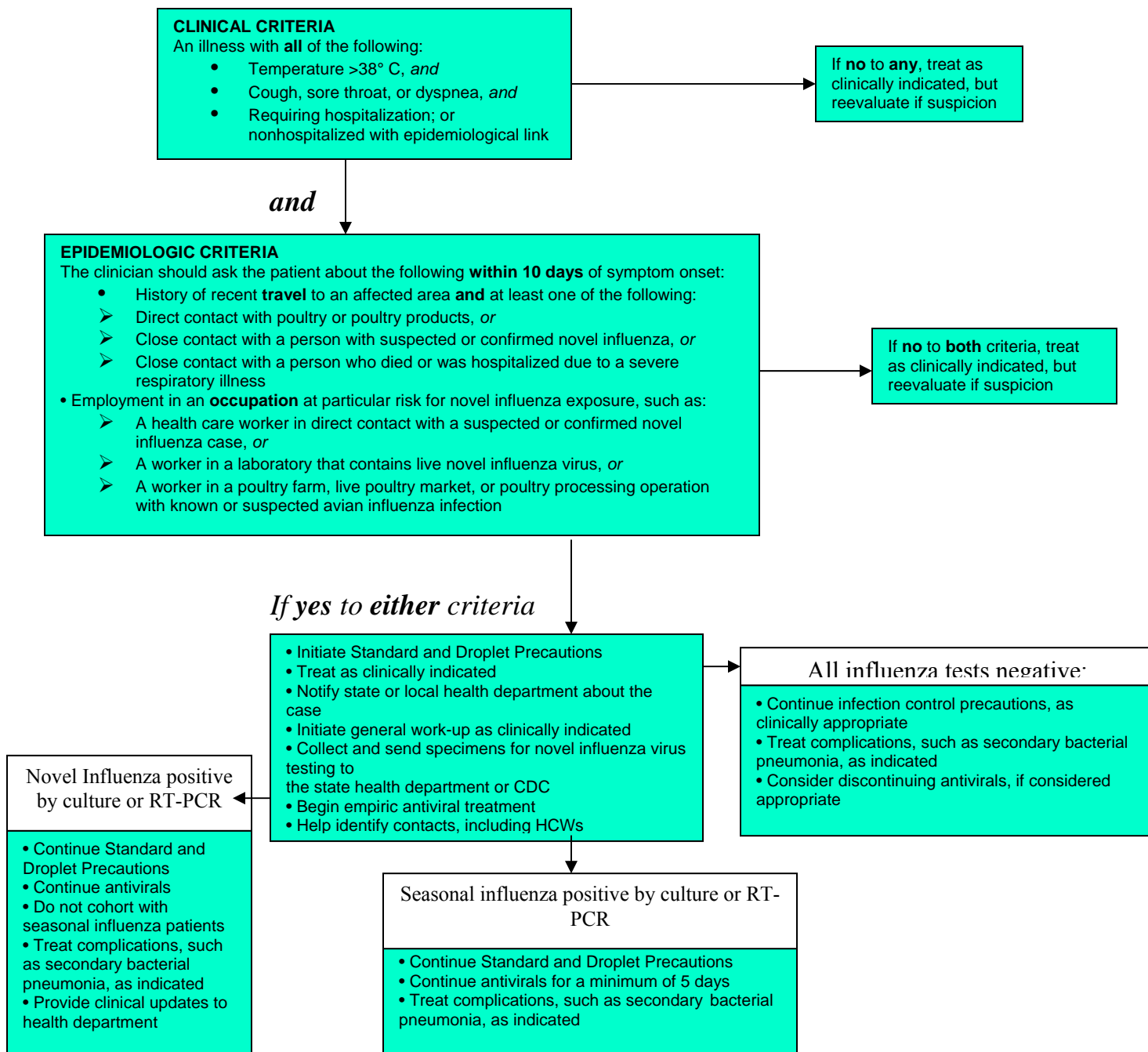
<b>TABLE 4. RECOMMENDED SITE OF CARE</b>	<b>BASED ON CURB-65 SYSTEM</b>
<b>Number of points</b>	<b>Recommended site of care</b>
0-1	Outpatient
2	Admit to medical ward
3-5	Admit to medical ward or ICU

### Children

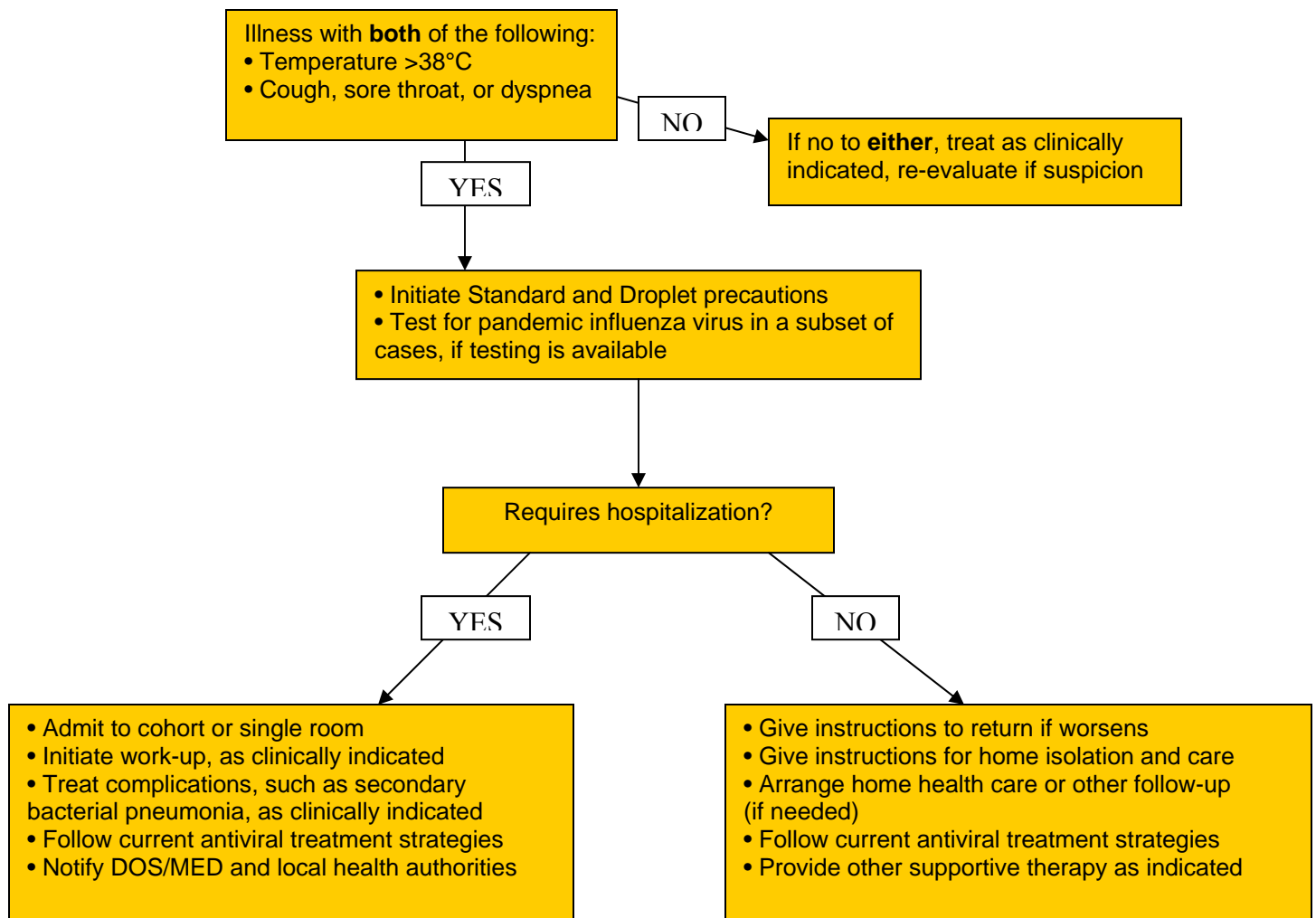
Current guidelines provide indicators for hospitalization of children with CAP. For infants, the indications include temperature  $>38.5^{\circ}\text{C}$ , respiratory rate (RR)  $>70$  breaths per minute, chest retractions, nasal flaring, hypoxia, cyanosis, intermittent apnea, grunting, and poor feeding. Indications for hospitalization among older children include temperature  $>38.5^{\circ}\text{C}$ , RR  $>50$ , chest retractions, nasal flaring, hypoxia, cyanosis, grunting, and signs of dehydration.

As with pandemic influenza, the decision to hospitalize for post-influenza bacterial community-acquired pneumonia during the Pandemic Period will rely on the clinician's assessment of the patient as well as availability of personnel and hospital resources. Although an unstable patient will be considered a high priority for admission, patients with certain high-risk conditions might also warrant special attention. Home management with follow-up might be appropriate for well-appearing young children with fever alone.

**Figure 1: Clinical management, interpandemic and pandemic alert periods.**



**FIGURE 2. Case detection and clinical management during the pandemic period**



## **Supplement Six:**

### **Vaccine Distribution and Use**

#### Executive Summary

The most important prevention and containment strategy for pandemic influenza is immunization. Unfortunately, preparation of a useful vaccine requires several months lead time: If pandemic influenza breaks out, it will be at least 4-6 months before a vaccine based on the circulating pandemic virus is available for use. Hence, while mass vaccination will ideally be a large part of our local and global strategies, it will necessarily take time to implement.

A supply of influenza A (H5N1) vaccine is being produced and stockpiled from inactivated Avian influenza virus that was isolated from a 2004 (Vietnam) human H5N1 “Bird Flu” case. Should the H5N1 virus become a pandemic strain for humans, it is hoped that this vaccine could provide protection for those receiving it. DOS/MED expects to be supplied this pre-pandemic vaccine by the HHS for overseas health units to distribute to designated priority groups.

Whether the pre-pandemic vaccine mentioned above or a new vaccine produced in response to a real pandemic, vaccine distribution (if supplies are limited) will follow recommended prioritization. The HHS has defined four categories into which all persons fall; when vaccine supplies are limited, immunization starts with Category One persons (e.g. health care workers; persons > 6 months of age who have been hospitalized with pneumonia in the past, etc.) and advances through the four categories as supplies allow.

This supplement details the possible vaccination scenarios, required documentation, and other logistical tasks that will need to be addressed (e.g. two doses of vaccine may be required to induce immunity).

Before a vaccine containing the circulating pandemic virus strain becomes available, pre-pandemic vaccine from stockpiles (if available) may be considered for persons in designated priority groups. Once a vaccine against the circulating pandemic virus strain becomes available, its distribution and delivery will be a major focus of pandemic response efforts. For implementation of an immunization program:

The CDC/HHS, WHO role is to:

- Announce the beginning and end of the various phases of a pandemic.
- Develop generic guidelines and information templates that can be modified or adapted as needed.
- Communicate information and guidance regarding influenza vaccine, antiviral, virology, clinical features, infection control, community containment and a national/international response to the pandemic.
- Stockpile pre-pandemic Influenza A (H5N1) for early use in the event of a pandemic with this strain.



The DOS/MED role is to:

- Collaborate with the CDC/HHS/DOD in procurement of vaccine supplies for those eligible under the DOS medical program.
- Communicate to all DOS missions information and guidance specific to the Foreign Service regarding influenza vaccine, antivirals, and generic guidelines and information templates on infection control and community containment.
- Develop a plan and system to distribute vaccines to overseas Health Units.
- Ensure cold chain maintenance for vaccines distributed centrally.

The RMO/FSHP/HU role is to:

- Communicate with DOS/MED regarding the health needs and medical concerns affecting the Post and Region.
- Ensure that the cold chain for vaccines has been maintained during shipment and continues to be maintained, ensuring that refrigerators housing vaccines have temperature alarms and that alternative power sources are in place.
- Use a standardized vaccine registry form as developed or utilized by DOS/MED.
- Ensure the safety and security of all vaccines.
- Risk-stratify patients for vaccination in the event a small cache of vaccines is available.
- Strongly encourage seasonal influenza vaccine to all members of the mission.
- Identify local vaccine manufacturers in their region.

## I. Recommendations for the Interpandemic and Pandemic Alert Periods

### A. Seasonal influenza and pneumococcal vaccination

During the Interpandemic Period, DOS/MED and overseas health units should work to enhance levels of seasonal influenza vaccination in groups at risk for severe influenza, including healthcare workers, and pneumococcal polysaccharide vaccination as outlined below. Health unit personnel should update and encourage routine vaccinations to all school age children and the use of pneumococcal vaccine (PCV) for all children  $\leq$  23 months of age and (PPV23) for high-risk patients, 2-50 years, and adults  $\geq$  50 years. Increased use of pneumococcal polysaccharide vaccine may decrease rates of secondary bacterial infections during a pandemic. Because large-scale pneumococcal vaccination might not be feasible once a pandemic occurs, the Interpandemic Period and Pandemic Alert is the ideal time to deliver this preventive measure.

### B. Preparedness for vaccination against a pandemic influenza virus

A monovalent vaccine directed against the circulating pandemic virus strain of influenza, however, may not begin to be available until 4-6 months after identification of the new pandemic virus strain. Initial pandemic vaccine stocks will be used to vaccinate DOS/HHS designated priority groups (Table 1). After vaccination of these priority groups, vaccination of all those who desire it will be phased in depending on available supplies.

1. Vaccination of Priority Groups

During a pandemic, changes may be made based on the characteristics of the causative virus (e.g., transmissibility, virulence, initial geographic distribution, age-specific attack rates, complication rates) and on vaccine effectiveness. To prepare for vaccination of priority groups, health units, in consultation with DOS/MED should:

- a. Review national recommendations for pandemic influenza vaccination and develop post-specific modifications or refinements in priority groups, depending on local circumstances.
- b. Develop specific definitions for priority groups (e.g., security personnel, essential service providers) identifying occupational categories and sub-categories within each broad priority.
- c. Estimate the size of relevant priority groups.
- d. Develop a plan to identify persons in priority groups at vaccination clinics and how to vaccinate these groups most efficiently.
- e. Educate professional organizations and other stakeholders about the need for priority groups and the rationale for the groups currently recommended.

2. Vaccine Procurement and Distribution

a. For priority groups that have been identified, post health units, in consultation with DOS/MED should:

- (1.) Determine whether vaccine will be shipped directly from the manufacturer to vaccine providers or to DOS/MED for further distribution.
- (2.) Identify personnel who will provide vaccination to persons in priority groups.
- (3.) Develop strategies for rapid distribution and administration of vaccines, taking into account vaccine security issues, cold chain requirements, and transport and storage issues.
- (4.) Develop procedures for collecting, removing, and disposing of used syringes, needles, and other vaccination supplies.
- (5.) Develop a plan for training vaccinators and other staff responsible for large-scale vaccination.
- (6.) Develop strategies for vaccinating hard-to-reach populations and populations at posts without health units.
- (7.) Address specifically, the delivery of pandemic vaccine to posts without health units and medically underserved populations to improve equity in access within priority groups and, later, the general population.
- (8.) Develop mechanisms to allocate vaccine based on projected need.
- (9.) Develop mechanisms to collect unused vaccine (if any) from healthcare providers who have met their priority vaccination goals and distribute the vaccine to those who have not.
- (10.) Monitor that vaccine administration follows existing plans on priority groups.

b. Second-Dose Vaccination

If two doses are required to achieve immunity, it will be necessary to ensure that vaccinated persons return for the second dose.

Health units, in consultation with DOS/MED should:

- (1.) Arrange for information about the need for a second dose to be provided at the time of vaccination.
- (2.) Ensure that planning for vaccine procurement and distribution to clinics and other facilities accounts for the need to use portions of future shipments for second doses, thus reducing the number of available first doses.
- (3.) Implement an immunization registry that would accomplish the goals of pandemic vaccination.

c. Vaccine Supply and Distribution

DOS/MED will collect data from overseas health units on a scheduled routine basis, as conditions allow. At a minimum, tracking data should include:

- (1.) Number of doses administered, by date and age, priority group, and post location.
- (2.) Number of doses that represent second doses, as applicable.

d. Vaccine coverage

DOS/MED, in partnership with CDC, will work with health units to develop a system for monitoring vaccination rates at regular intervals, where feasible.

e. Vaccine safety

Overseas health units, in consultation with DOS/MED, should develop a system to report and investigate Adverse Events Following Immunization (AEFI) with a pandemic influenza vaccine.

- (1.) DOS/MED will coordinate planning for and implementation of adverse-events reporting and education of providers and will serve as contact with the Vaccine Adverse Event and Reporting System (VAERS).
- (2.) VAERS typically involves direct reporting by individual healthcare providers, with periodic feedback to DOS/MED.
- (3.) Adverse events related to use of IND vaccines might be reported through other mechanisms in addition to or in place of VAERS, in accordance with specific regulatory or policy requirements.

4. Legal Preparedness

DOS/MED will ensure that appropriate legal authorities are in place to facilitate implementation of plans for distributing pandemic influenza vaccines. Steps may include:

- (1.) Ensure that plans for distribution of vaccines are reviewed by DOS/L.
- (2.) Determine whether federal law allows non-licensed volunteers or healthcare workers from other jurisdictions to administer influenza vaccines.

- (3.) Work with professional organizations and unions to consider options for emergency performance of tasks outside of standard job descriptions.
- (4.) Determine whether federal law allows mandatory vaccination to the protect public health, if needed.

## II. Recommendations for the Pandemic Period When a Vaccine Becomes Available

Once a vaccine is ready for distribution, DOS/MED will work with overseas healthcare providers to activate plans to:

- A. Vaccinate persons in priority groups, in accordance with existing recommendations.
- B. Provide a second dose, if required for immunity.
- C. Monitor vaccine supply, distribution, and use.
- D. Monitor and investigate adverse events.
- E. Continue communication with partners and the public.
- F. Phase-in vaccination of the entire population, based on age or other criteria ensuring fair, equitable, and orderly distribution according to HHS national recommendations once priority groups have been vaccinated and additional stocks of vaccine are available.

After the pandemic has ended, DOS/MED will evaluate all response activities, including vaccine tracking and delivery, adverse event monitoring, and communications.

***Figure 1: Vaccine Monitoring and Data Collection:***

**Vaccine and Antiviral Monitoring Log**

*Date:*

*Name:*

*Emergency Contact Number:*

*Age:*

*Risk Category:*

*Allergies:*

*Current Medications:*

*Antiviral Medications:*

*Temperature:*

*SpO2:*

*Vaccine #1:*

*Vaccine #2:*

*Lot Number:*

*Lot Number:*

*Manufacturer:*

*Manufacturer:*

*Return date for Vaccine #2:*

*Date:*

*Vaccination site:*

*Vaccination site:*

*Adverse reaction to vaccination: YES (fill out VAERS)      NO*

Online VAERS reporting: [www.vaers.hhs.gov](http://www.vaers.hhs.gov) or  
<https://secure.vaers.org/scripts/VaersDataEntry.cfm>

**Table 1: DOS-Adapted HHS Vaccine Tiered Priority Groups**

<i>Tier</i>	<i>Population</i>	<i>Rationale</i>
1A	Medical workers and public health workers who are involved in direct patient contact, other support services essential for direct patient care, and vaccinators.	Healthcare workers are required for quality medical care (studies show outcome is associated with staff-to-patient ratios). There is little surge capacity among healthcare sector personnel to meet increased demand.
1B	<ul style="list-style-type: none"> <li>Persons &gt; 65 years with 1 or more influenza high-risk conditions, not including essential hypertension.</li> <li>Persons 6 months to 64 years with 2 or more influenza high-risk conditions, not including essential hypertension.</li> <li>Persons 6 months or older with history of hospitalization for pneumonia or influenza or other influenza high-risk condition in the past year.</li> </ul>	These groups are at high risk of hospitalization and death.
1C	<ul style="list-style-type: none"> <li>Pregnant women.</li> <li>Household contacts of severely immunocompromised persons who would not be vaccinated due to likely poor response to vaccine (e.g., those with transplants, AIDS, and cancer)</li> <li>Household contacts of children &lt;6 month olds.</li> </ul>	<ul style="list-style-type: none"> <li>In past pandemics and for annual influenza, pregnant women have been at high risk; vaccination will also protect the infant who cannot receive vaccine.</li> <li>Vaccination of contacts of immunocompromised and young infants will decrease risk of exposure and infection among those who cannot be directly protected by vaccination.</li> </ul>
1D	<ul style="list-style-type: none"> <li>Public health emergency response workers critical to pandemic response.</li> <li>Key U.S. mission leaders.</li> </ul>	<ul style="list-style-type: none"> <li>Critical to implement pandemic response such as providing vaccinations and managing/monitoring response activities.</li> <li>Preserving decision-making capacity also critical for managing and implementing a response.</li> </ul>
2A	<ul style="list-style-type: none"> <li>Healthy 65 years and older.</li> <li>6 months to 64 years with 1 high-risk condition.</li> <li>6-23 months old, healthy.</li> </ul>	Groups that are also at increased risk but not as high risk as population in Tier 1B.
2B	<ul style="list-style-type: none"> <li>Other public health emergency responders.</li> <li>Public safety workers including security personnel.</li> <li>GSO workers essential for maintenance of power, water, and sewage system functioning.</li> <li>Personnel transporting fuel, water, food, and medical supplies.</li> <li>Telecommunications/IT for essential network operations and maintenance.</li> </ul>	Includes critical infrastructure groups that have impact on maintaining health; implementing a pandemic response; and on maintaining societal functions
3	<ul style="list-style-type: none"> <li>Other key government health decision-makers</li> <li>Those responsible for mortuary services/embalmers</li> </ul>	Other important societal groups for a pandemic response but of lower priority.
4	Healthy persons 2-64 years not included in above categories	All persons not included in other groups based on objective to vaccinate all those who want protection.

**High Risk for Influenza-related complications**

- 1. Patients with diabetes, emphysema, coronary heart disease, angina, heart attack or other heart condition.**
- 2. Having a diagnosis of cancer during the previous 12 months or ever being told by a physician they have lymphoma, leukemia, or blood cancer during the previous 12 months.**
- 3. Being told by a physician they have chronic bronchitis or weak or failing kidneys**
- 4. Reporting an asthma episode or attack during the preceding 12 months**

## **Supplement Seven: Antiviral Drugs Distribution and Use**

### **Executive Summary**

This Supplement draws upon the CDC/HHS suggested planning for the utilization of oral antiviral medication when faced with a potential Pandemic Influenza occurrence. It directs DOS caregivers' utilization of the prepositioned stockpiles of the available medications.

The oral antiviral drug oseltamivir ("Tamiflu") can be used in three ways (in persons > 1 year of age):

- (1) Pre-exposure prophylaxis against developing symptoms and signs of influenza
- (2) Post-exposure prophylaxis against developing symptoms and signs of influenza
- (3) Treatment once flu symptoms appear (ideally within 24-48 hours of symptom onset) in order to minimize duration and severity of illness

Zanamivir ("Relenza"), another antiviral medication in the same class as oseltamivir, is only indicated for treatment and restricted to persons > 6 years of age. It is produced in an oral inhalation form only and currently is not widely available.

During a Pandemic, efficacy in achieving the desired results will be known only after the drugs are utilized in large numbers of patients. Nevertheless, the use of anti-viral medications remains one of the key strategies for combating a possible influenza pandemic. Most hopes are pinned on oseltamivir since it has shown promising results with novel influenza viruses grown in laboratory mice and with seasonal influenza viruses in humans.

DOS/MED is in the process of pre-positioning stockpiles of oseltamivir at all U.S. Missions overseas. Guidance provided in Supplement 7 covers optimizing its use, including such strategies as: prophylaxis of contacts, containment of disease clusters, and treatment of flu patients deemed to be at high risk for complications. As with pandemic influenza immunization, the concept of "priority groups" is utilized for judicious dispensation of this potentially helpful drug. During a pandemic, the emphasis will be on treatment rather than prophylaxis in order to conserve limited drug stockpiles.

### **I. Rationale**

Appropriate use of the neuraminidase inhibitors, *oseltamivir* and *zanamivir*, during an influenza pandemic may reduce morbidity, hospitalization and mortality. Antivirals might also be used during the Pandemic Alert Period in limited attempts to contain small disease clusters and potentially slow the spread of novel influenza viruses. A huge and uncoordinated demand for antivirals early in a pandemic, however, could rapidly deplete DOS drug supplies. Preparedness planning for optimal use of antiviral stocks is therefore essential.

## II. Interpandemic, Pandemic Alert and Pandemic Periods

A patient with either a suspected case of avian influenza A (H5N1) or another novel strain of influenza or a pandemic strain once a pandemic is declared should be isolated as described in Supplement 4 and treated in accordance with the clinical algorithm provided below (figure 1). As of spring 2006, the recommendation for treatment includes the use of oseltamivir or zanamivir, administered as early as possible and ideally within 48 hours after onset of symptoms. Current U.S. recommended doses for antiviral treatment are provided in Tables 1 & 2, below.

Note: In April 2005, DOS/MED placed stockpiles of oseltamivir at all U.S. missions in East Asia with the exception of New Zealand, Australia, and the Pacific Islands. In February 2006, DOS/MED received additional oseltamivir to be stockpiled at all of the remaining U.S. overseas missions. **These stockpiles are for pandemic use only.**

### A. Priority Groups

1. **TREATMENT:** All who are eligible for benefits under the DOS Medical Program (mission personnel, eligible family members and locally engaged staff for occupational health) will be eligible for treatment if pandemic influenza is confirmed either by laboratory testing or by clinical criteria and if treatment can be administered within 48 hours of onset of symptoms. The effectiveness of treating those who present beyond 48 hours is not supported by current data. Nevertheless, those in this latter category may be considered for treatment on a case-by-case basis in the light of existing antiviral drug supplies. Special consideration will be given to those hospitalized, those who are immunocompromised, pregnant women, young children 12-23 months old, persons > 65 yrs old and persons with underlying medical conditions.
2. **Prophylaxis:** Consistent with the HHS Pandemic Influenza Plan, antivirals prophylaxis will be considered primarily for healthcare workers and volunteer responders as the most critical groups for an effective healthcare response and they have limited surge capacity. Prophylaxis will prevent absenteeism in this group.
  - a. **Use of Antivirals for Prophylaxis of Contacts: Novel Influenza Strain**  
DOS/MED, in consultation with CDC, will consider whether it is necessary and feasible to trace a novel influenza patient's close contacts and provide them with post-exposure antiviral prophylaxis from supplies other than pandemic stockpiles. Close contacts may include family, schoolmates, workmates, healthcare providers, and fellow passengers if the patient has been traveling. If deemed necessary by DOS/MED and CDC, these persons may receive post-exposure prophylaxis with oseltamivir. The FDA has recently approved Zanamivir for prophylaxis but is not as readily available. If the exposure to the novel influenza virus strain occurs during the regular influenza season, the patient's healthcare contacts (who may also care for persons with seasonal influenza) should be



vaccinated against seasonal influenza to reduce the possible risk of co-infection and reassortment of seasonal and novel strains.

b. Use of Antivirals for Containment of Disease Clusters

In special circumstances, DOS/MED, in consultation with CDC, might consider “targeted antiviral prophylaxis” as a community-based measure for containing small clusters of infection with novel strains of influenza. This measure could be implemented in small, well-defined settings such as the initial introduction of a virus with pandemic potential into a small community or a military base. However, once a pandemic is underway, such a strategy would not represent an efficient use of limited antiviral supplies. Because targeted antiviral prophylaxis would require rapid delivery and administration of substantial stocks of antiviral drugs, its feasibility would be evaluated in light of antiviral drug supply. Targeted antiviral prophylaxis would involve investigation of disease clusters, administration of antiviral treatment to persons with confirmed or suspected cases of pandemic influenza, and provision of drug prophylaxis to all persons in the affected community. Targeted antiviral prophylaxis would also require intensive case finding in the affected area as well as effective communication with the affected community. In most DOS overseas locations, such activities will exceed the capacity of DOS/MED healthcare providers and stockpiles of antiviral drugs.

c. When There Is Widespread Transmission of Pandemic Influenza

- (1.) When transmission of pandemic influenza has become widespread, the paramount goals of antiviral use will be to treat in order to reduce disease severity and mortality and to preserve the delivery of healthcare and other essential critical services through early treatment and limited prophylaxis.
- (2.) After a vaccine becomes available, antiviral drugs may be used to protect persons who have an inadequate vaccine response (e.g., the elderly and those with underlying immunosuppressive disease) as well as persons with contraindications to vaccination, such as anaphylactic hypersensitivity to eggs (if an egg-based vaccine is used) or other vaccine components.
- (3.) Until the pandemic has waned, DOS/MED will continue to work with healthcare and federal partners to monitor the safety and effectiveness of antivirals and to encourage appropriate drug use practices that help minimize the development of drug resistance.

B. Distributing and Dispensing Antivirals

1. Antiviral drug prophylaxis as a general strategy is not compatible with the present very limited supplies of neuraminidase inhibitors. Also, in January 2006, the CDC recommended that the adamantanes (amantadine and rimantidine) not be used to prevent (or to treat)

influenza this year due to increased resistance. Pandemic waves are expected to last at least 6 weeks and may recur. Because prophylaxis for approximately 6 weeks would require at least four times the number of doses as a 5-day treatment course per individual, huge antiviral stockpiles would be required to permit prophylaxis of more than a small proportion of a community.

2. Early in the course of the pandemic a rapid “gatekeeper” laboratory test should be utilized, if available, to determine which patients are infected with pandemic influenza and are eligible for treatment with antiviral drugs from limited stockpiles.
3. If a rapid laboratory test is not available early in a pandemic, clinical criteria will be utilized to determine treatment eligible patients. Clinical criteria will also take a more predominant role in diagnosis after the pandemic is established.
4. Ideally, RMOs, FSHPs, or LES medical personnel should examine and evaluate any patient presenting with influenza like illness (ILI) during a pandemic.
  - If the patient meets either the laboratory or clinical criteria for a diagnosis of pandemic influenza, has no known contraindication to receiving oseltamivir and is within 48 hours of the onset of symptoms, treatment should be initiated according to Tables 1 and 2.
5. In locations without DOS healthcare providers, consideration should be given to:
  - a. Dispensing to those without contraindications, one treatment course per person of oseltamivir in advance of infection, or
  - b. Designating an officer responsible for the security and proper management of the local oseltamivir stockpile, in consultation with the RMO.
6. Strategies for appropriate antiviral drug distribution should include scenarios in which local DOS healthcare providers are:
  - a. Overwhelmed by patient volumes.
  - b. Ill and incapacitated by pandemic influenza.

#### C. Pediatric Use

None of the available influenza antivirals are currently FDA approved for use among children aged <1 year. In particular, the safety and efficacy of oseltamivir has not been studied in children aged <1 year for either treatment or prophylaxis of influenza (see oseltamivir package insert). The decision by an individual physician to treat children aged <1 year in an emergency setting on an off-label basis with an antiviral must be made on a case-by-case basis with full consideration of the potential risks and benefits. Additional human data on the safety of these agents in the treatment of influenza in young children are needed. Oseltamivir is available as an oral suspension for use in children. This formulation of oseltamivir may not be available in sufficient supply during a pandemic to treat all pediatric patients. If RMOs or FSHPs consider opening 75 mg oseltamivir capsules and using the contents in an attempt to deliver a

partial, pediatric dose to children, it must be recognized that there are insufficient data on palatability, stability, and dosing consistency to predict the safety or effectiveness of such unapproved use. Additional study of these issues is needed.

D. Monitoring and Data Collection

To ensure optimal use of antiviral drugs during an influenza pandemic, DOS/MED providers should collect data on:

1. Distribution of DOS/MED stockpiles of antiviral drugs
2. Occurrence of adverse events following administration of antiviral drugs

Serious adverse events associated with the use of antiviral drugs for prophylaxis and treatment of influenza should be reported to DOS/MED and to the FDA, using the MedWatch monitoring program (forms available at <http://www.fda.gov/medwatch/>). Adverse events reported to MedWatch are collated and analyzed by FDA's Adverse Events Reporting System (AERS).

3. Effectiveness of treatment and prophylaxis

Studies to evaluate the effectiveness of antiviral drug use during a pandemic may be conducted by federal agencies in collaboration with DOS/MED and other federal, healthcare, and academic partners.

4. Development of drug resistance

- a. CDC may work with DOS/MED to monitor the development of resistance to antivirals, depending on available resources.
- b. CDC will test the drug susceptibilities of viruses isolated from different age groups and geographic groups over the course of the pandemic. DOS/MED will encourage clinicians, where possible, to obtain specimens from patients who develop severe disease while receiving treatment or prophylaxis (see Supplement 2).

E. Training

DOS/MED will, as resources enable, enhance training and education efforts related to use of antiviral drugs during a pandemic. Exercises that involve healthcare providers who will administer antivirals to individual patients are essential to ensure that distribution systems are in place and that roles and responsibilities are well understood. It may be useful, for example, to provide healthcare providers with educational materials and to practice emergency distribution of antiviral drugs to target groups.

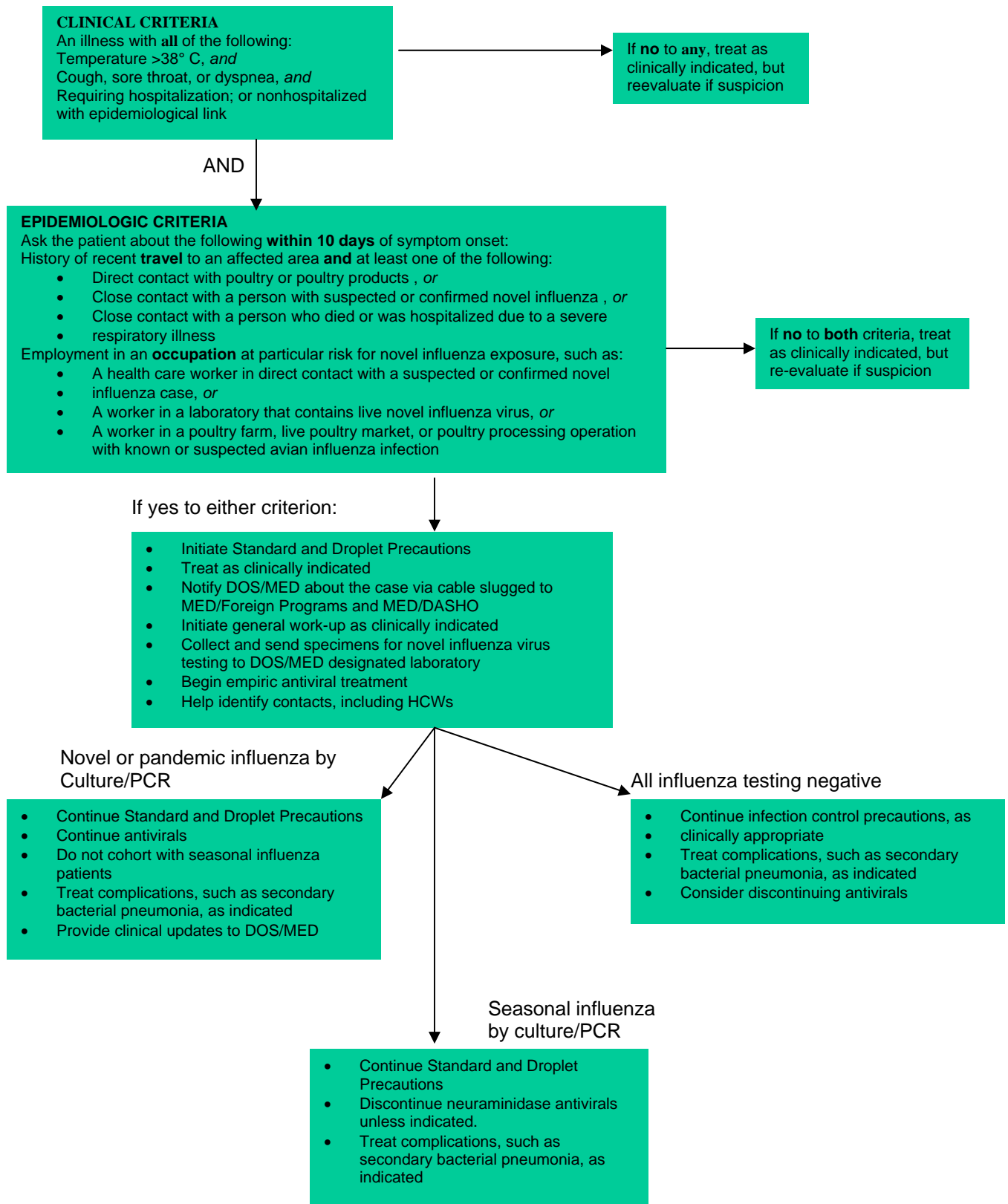
**Table 1: Antiviral dosing, influenza A/B**

<i>Antiviral agent</i>	<b>1-6 yrs</b>	<b>7-9 yrs</b>	<b>10-12 yrs</b>	<b>13-64 yrs</b>	<b>65 or more yrs</b>
<b>Zanamivir</b>					
Treatment	NA	10 mg bid	10 mg bid	10 mg bid	10 mg bid
<b>Oseltamivir</b>					
Treatment	Varies by wt.*	Varies by wt.*	Varies by wt.*	75 mg bid	75 mg bid
<b>Prophylaxis</b>	NA	NA	NA	75 mg/d	75 mg/d

***\*Table 2: Oseltamivir pediatric treatment dosing, by weight***

Less than or equal to 15 kg	30 mg bid
> 15 to 23 kg	45 mg bid
> 23 to 40 kg	60 mg bid
> 40 kg	75 mg bid

**Figure 1: Case detection and clinical management: interpandemic, pandemic alert and pandemic periods.**



**Table 2: Antiviral Drug Priority Groups - DOS-Adapted HHS Recommendations**

	<b>Group</b>	<b>Strategy*</b>	<b>Rationale</b>
1	Patients admitted to hospital**	T	Consistent with medical practice and ethics to treat those with serious illness and who are most likely to die.
2	Health care workers (HCW) with direct patient contact and emergency medical service (EMS) providers	T	Healthcare workers are required for quality medical care. There is little surge capacity among healthcare sector personnel to meet increased demand.
3	Highest risk outpatients—immunocompromised persons and pregnant women	T	Groups at greatest risk of hospitalization and death; immunocompromised cannot be protected by vaccination.
4	Pandemic health responders (public health, vaccinators, vaccine and antiviral manufacturers), public safety (police, fire, corrections), and government decision-makers	T	Groups are critical for an effective public health response to a pandemic.
5	Increased risk outpatients—young children 12-23 months old, persons >65 yrs old, and persons with underlying medical conditions	T	Groups are at high risk for hospitalization and death.
6	Outbreak response in nursing homes and other residential settings	PEP	Treatment of patients and prophylaxis of contacts is effective in stopping outbreaks; vaccination priorities do not include nursing home residents.
7	HCWs in emergency departments, intensive care units, dialysis centers, and EMS providers	P	These groups are most critical to an effective healthcare response and have limited surge capacity. Prophylaxis will best prevent absenteeism.
8	Pandemic societal responders (e.g., critical infrastructure groups as defined in the vaccine	T	Infrastructure groups that have impact on maintaining health, implementing a pandemic response, and maintaining societal functions.

	priorities) and HCW without direct patient contact		
9	Other outpatients	T	Includes others who develop influenza and do not fall within the above groups.
10	Highest risk outpatients	P	Prevents illness in the highest risk groups for hospitalization and death.
11	Other HCWs with direct patient contact	P	Prevention would best reduce absenteeism and preserve optimal function.

\*Strategy: Treatment (T) requires a total of 10 capsules and is defined as 1 course. Post-exposure prophylaxis (PEP) also requires a single course. Prophylaxis (P) is assumed to require 40 capsules (4 courses) though more may be needed if community outbreaks last for a longer period.

\*\*There are no data on the effectiveness of treatment at hospitalization. If stockpiled antiviral drug supplies are very limited, the priority of this group could be reconsidered based on the epidemiology of the pandemic and any additional data on effectiveness in this population. Outpatients at highest risk for severe morbidity or mortality from influenza infection

#### Definition

The advisory committee on immunization practices defines groups at high risk (or increased risk) of complications from influenza infection during annual outbreaks based on age (6-23 months and >65 years) and underlying illnesses. These include persons with hematopoietic stem cell transplants (HSCT) and solid organ transplants; those with severe immunosuppression due to cancer therapy or hematological malignancy; persons receiving immunosuppressive therapy for other illnesses (e.g., rheumatoid arthritis); persons with HIV infection and a cd4 count <200; persons on dialysis; and women who are in the second or third trimester of pregnancy.

#### Strategy

Treatment within 48 hours of symptom onset.

#### Rationale

Of the large group of persons who are at increased risk of severe disease or death from influenza, THESE GROUPS REPRESENT THE POPULATION AT HIGHEST RISK AND WHO ARE LEAST LIKELY TO BE PROTECTED BY VACCINATION. Studies show that neuraminidase inhibitor therapy decreases complications and hospitalizations from influenza in high-risk persons and one unpublished study shows a significant decrease in mortality among patients who have undergone a hematopoietic stem cell transplant.

## **Supplement Eight:**

### **Community Disease Control and Prevention**

#### Executive Summary

This supplement, based on the HHS/CDC Pandemic Influenza Plan provides recommendations to overseas missions and domestically on the use of disease containment strategies to prevent disease transmission at different phases of an influenza pandemic. The Interpandemic and Pandemic Alert period recommendations focus on preparedness planning for implementation of containment measures. They also outline actions that may be taken during the earliest stage of a pandemic when the first potential cases or disease clusters are detected. In this setting, relatively intense individual-level containment measures (patient isolation and identification, monitoring and quarantine of contacts) may be used without causing undue strain on limited public health and health care resources.

The Pandemic Period recommendations focus on measures that may be beneficial and practical when there is a large number of cases and extensive viral transmission. In such a setting, individual-level measures may no longer be effective or feasible (if hospital isolation beds can no longer accommodate all patients, if most contacts cannot be traced in time to prevent further exposures, or if staffing constraints make contact-tracing impractical). In that case, overseas missions in coordination with host country governments as well as the DOS domestically along with state and local health departments may consider measures that decrease social contact within groups or whole communities (quarantine of groups of exposed persons, cancellation of public events, snow days, self-shielding or widespread community quarantine). Effective use of community containment measures during a pandemic will require continuous evaluation of such parameters as viral transmissibility, the number and geographic distribution of cases, the reproductive rate of epidemic propagation, and the nature and severity of illness.

Overseas missions and the DOS domestically must establish education campaigns involving community partners (government, schools, places of worship, businesses) to prepare influenza hotlines, work from home schedules, snow days, and home preparedness for quarantines. An essential message that must be conveyed both domestically and to overseas missions relates to the imperative that any one who is ill should remain out of public places and should not come to work.

#### I. Rationale

The foci of containment activities will be public health and individual measures that attempt to slow and limit viral transmission. For the purposes of this document, containment measures refer to measures that attempt to fully limit transmission as well as those that attempt to slow transmission. Containment strategies aimed at controlling and slowing the spread of the virus might include measures that affect individuals (e.g., isolation of patients and monitoring their contacts) as well as measures that affect groups or entire communities (e.g., cancellation of public gatherings; implementation of community-wide “snow days”). Guided by epidemiological data, DOS/MED, RMOs and FSHPs, in consultation with other federal partners (e.g., CDC), will recommend to DOS



senior management and chiefs of mission the implementation of the most appropriate of these measures in efforts to maximize impact on disease transmission and minimize impact on individual freedom of movement.

Containment measures applied to individuals (e.g., isolation and quarantine) may have limited impact in preventing the transmission of pandemic influenza, due to the short incubation period of the illness, the ability of persons with asymptomatic infection to transmit virus, and the possibility that early symptoms among persons infected with a novel influenza strain may be non-specific, delaying recognition and implementation of containment. With a less efficiently transmitted virus in the earlier phases of a pandemic, however, these measures may have great effectiveness, slowing disease spread, and allowing time for targeted use of medical interventions. When disease transmission is occurring in local communities, individual quarantine is much less likely to have an impact and likely will not be feasible to implement. Thus, community-based containment measures (e.g., closing schools or restricting public gatherings) and emphasizing what individuals can do to reduce their risk of infection (e.g., hand hygiene and cough etiquette) may be more effective disease control tools. *The goals of containment activities during a pandemic should be to slow the spread of disease early after introduction into the local region or community and to limit the number of persons who become infected in community outbreaks throughout the pandemic.*

## II. Terms and Definitions

**Isolation** is the separation and restriction and movement or activities of ill infected persons (patients) who have a contagious disease, for the purpose of preventing transmission to others.

**Quarantine** is the separation and restriction of movement or activities of persons who are not ill but who are believed to have been exposed to infection, for the purpose of preventing transmission of disease. Individuals may be quarantined at home or in designated facilities; healthcare providers and other response workers may be subject to quarantine when they are off duty.

**Quarantine of close contacts** refers to the quarantine of individuals exposed to patients with communicable diseases (e.g., family members, work or school mates, healthcare workers).

**Quarantine of groups of exposed persons** refers to quarantine of people who have been exposed to the same source of illness (e.g., a case of influenza at a public gathering, on an airline, train, or cruise ship, at a school or workplace or apartment complex, or at a recently visited store or office).

**Widespread or community-wide quarantine** refers to the closing of community borders or the erection of a real or virtual barrier around a geographic area (a cordon sanitaire) with prohibition of travel into or out of the area.

**Self-shielding** refers to self-imposed exclusion from infected persons or those perceived to be infected (e.g., by staying home from work or school during an epidemic).

**Snow days** are days on which offices, schools, transportation systems are closed or cancelled, as if there were a major snowstorm.

**Individual-level containment measures** include isolation of patients and management of their close contacts.

**Focused measures to increase social distance (or decrease social contact)** includes measures applied to groups rather than individuals or whole communities (e.g., quarantine of groups of exposed persons and measures that apply to the Use of specific sites or buildings).

**Containment measures that apply to use of specific sites or buildings** include cancellation of public events (e.g., concerts, sports events, movies and plays), closure of office buildings, apartment complexes, or schools; and closure of subways or bus lines. These measures may also involve restricting entrance to buildings or other sites (e.g., requiring fever screening or use of face masks before entry to schools, worksites, or airplanes).

**Community-based measures to increase social distance** include measures applied to whole neighborhoods, towns, or cities (e.g., snow days, establishment of fever clinics, and community-wide quarantine).

### III. Recommendations for the Interpandemic and Pandemic Alert Periods

- A. Community preparedness for implementation of pandemic influenza containment measures
  - 1. Planning for disease control and containment

Although individual quarantine as a control measure is likely only to be used during the Pandemic Alert and very early during the Pandemic Period—for example, among communities where initial cases are introduced into the local region, city or community—U.S. missions overseas should anticipate and prepare for the challenges of effectively implementing this measure by reviewing the steps involved in establishing and maintaining quarantine facilities and procedures.

    - a. Key activities (Domestic and Overseas):
      - (1.) Establish an incident command structure that can be used for influenza response.
      - (2.) Establish a legal preparedness.
      - (3.) Establish relationships with partners, such as law enforcement, first responders, health units, regional psychiatrists and local mental health professionals, local businesses, and the legal community.
      - (4.) Plan to monitor and assess factors that will determine the types and levels of response, including the epidemiological profile of the outbreak, available local resources, and level of community acceptance and participation.
      - (5.) Develop communication strategies for the community, senior DOS management, post management, healthcare and emergency response workers, mental health professionals, the community liaison coordinator and the regional security office.
      - (6.) Invite key partners to participate in pandemic influenza containment exercises and drills.
    - b. Key activities (Overseas):
      - (1.) Management of cases and contacts (including quarantine)

- o As personnel and resources allow, develop protocols, tools, and databases for:
  - Case surveillance
  - Clinical evaluation and management
  - Contact tracing, monitoring, and management
  - Reporting criteria
  - Develop standards and tools for home and non-hospital isolation and quarantine.
- o Establish supplies for non-hospital management of cases and contacts.
- o Establish a telecommunications plan for “hotlines” or other services for:
  - Case and contact monitoring and response
  - Fever triage
  - Public information
  - Provider information
- o Plan to ensure provision of essential services and supplies to persons in isolation and quarantine, keeping in mind the special needs of children. Services and supplies include:
  - Food and water
  - Shelter
  - Medicines and medical consultations
  - Mental health and psychological support services
  - Other supportive services (e.g., day care or elder care)
  - Transportation to medical treatment, if required
- o Establish procedures for medical evaluation and isolation of quarantined persons who exhibit signs of illness.
- o Develop protocols for monitoring quarantine measures, such as:
  - Protocols for follow-up of persons who cannot be reached by telephone. These may include a threshold period for non-response that should trigger a home visit or other means to locate the person. Partnerships with RSO and CLO resources will be helpful in tracing the whereabouts of persons who have violated restrictions.
  - Protocols for monitoring persons who cannot or will not comply with voluntary home quarantine.
- (2.) Temporary emergency facilities for patient isolation quarantine, and assessment of patients with fever
  - o Identify appropriate community-based facilities for isolation of patients who have no substantial healthcare requirements.
  - o Develop policies related to use of these facilities.
  - o Identify facilities for persons for whom home isolation is indicated but who do not have access to an appropriate home setting, such as TDYers and other travelers.
  - o Identify potential quarantine facilities and prepare contingency plans for staffing and equipping them.

- (3.) Establish procedures for medical evaluation and isolation of quarantined persons who exhibit signs of influenza like illness (ILI).
- (4.) Develop tools and mechanisms to prevent stigmatization and provide mental health services to persons in isolation or quarantine.
  - o Identify personnel for the implementation of movement restrictions, including quarantine, and the provision of essential services and supplies:
- (5.) Establish procedures for delivering medical care, food, and services to persons in isolation or quarantine. Examples of services that will require the help of non-traditional partners include:
  - o Training for responders and healthcare workers, as necessary, in use of personal protective equipment
  - o Plans for the mobilization and deployment of CLO and other community-service personnel

## 2. Legal preparedness

DOS/MED healthcare providers and the Chief of Mission (COM) have primary responsibility for public health matters within the mission, including isolation and quarantine. MED and DOS Missions will abide by, in step with HHS/CDC, current quarantine laws, regulations, and enforcement procedures. Any questions in this area should be brought to the attention of MED and the DOS Office of the Legal Advisor (L). Although the federal government and nearly all states have the basic legal authority to place persons exposed to certain communicable diseases under quarantine and enforce the required restrictions on activity, use of this authority may not always be necessary or practical. It is also unclear what legal authorities apply to Chief of Mission authority in this regard for overseas U.S. mission communities.

## 3. Planning for influenza clinics and hotlines

RMOs and FSHPs should designate offices or clinics or otherwise discrete areas for screening, triage, and care of individuals with influenza-like illness. Ill persons will be encouraged to call special *influenza hotlines* that provide advice on whether to stay home or to seek medical care. DOS/MED, coordinating with S/CMS/Op Center will establish a global hotline. Local mission Pandemic Planning Committees or EACs may wish to explore establishing local influenza hotlines that will have more locally relevant information, as resources and personnel allow. Personnel supporting hotlines as triage and information systems must be aware of the healthcare resources available in the local communities. These “community triage” efforts may help prevent U.S. mission health units and local hospitals from being overwhelmed with patients who do not require hospital-level care. Moreover, community triage efforts may also reduce the number of uninfected persons who mingle with infected persons at clinics and hospitals.

Preparedness planning for establishing influenza hotlines includes:

- Establishing telephone hotline numbers that people can call to report specific symptoms (e.g., fever) that will be specified by DOS/MED and CDC.
  - Identifying sites, staff members, and volunteers
  - Developing protocols for hotline staff members that include training components and triage decision trees or algorithms
4. Community understanding of disease containment measures  
Strategies for disease control will be facilitated by clear communication of the rationale for—and duration of—containment measures. Local public health education campaigns that involve community members and organizations can build confidence in the ability to cope with an influenza pandemic. Partners may include schools, CLO offices, American Chamber of Commerce, OSAC and other community-based organizations. Local public health campaigns should explain how individual action (e.g., strict compliance with respiratory hygiene, staying home when ill) and community efforts (e.g., social distancing measures, implementation of “snow days” and self-shielding) could help reduce disease transmission. Education campaigns can describe the criteria, justification, role, methodology, and duration of quarantine and the social, medical, and psychological ways in which persons will be supported during the quarantine period. They can also explain that quarantine—which temporarily restricts personal movement—is a collective action implemented for the common good. These key messages should be translated and modified as required to address the cultural and linguistic needs of locally engaged staff.
  5. Enforcement and support of community containment measures  
Experience from the 2003 SARS outbreak suggests that quarantine applied on a voluntary basis can be sufficient to reduce disease transmission even if compliance is less than perfect. Nevertheless, missions (MGT and DS) should be prepared to enforce individual and community-based containment measures, if needed.

B. Management of patients infected with novel strains of influenza and their contacts

1. Patient isolation  
Infection control precautions and procedures for isolating influenza patients—at home or in a residence, community facility, or hospital—are described in Supplement 4. The patient will be admitted to a hospital if clinically indicated, if public health needs require it, or if isolation at home or in a community facility cannot be achieved safely and effectively. As noted under legal preparations, local host country health authorities may enforce isolation in specified facilities to include foreign citizens and diplomats. DOS/MED, in consultation with CDC, will advise the overseas healthcare providers on additional steps that may be taken, before and after laboratory test results become available, via local, regional or CDC/WHO laboratories.
2. Management of close contacts

In most situations—even at the earliest stages of a pandemic—it will not likely be possible to trace and quarantine close contacts of suspected or confirmed cases within 48 hours (the average incubation period for human influenza). However, in certain situations, especially during the later phases of the WHO Pandemic Alert Period, efforts to identify exposed individuals or groups might be recommended.

Examples might include:

- a. Suspected or confirmed cases of novel influenza. For example, a suspected or confirmed case of avian influenza A (H5N1) in persons who have traveled to an H5N1-affected country and have been exposed to sick poultry (either through handling or eating poultry products) or a laboratory-confirmed human case of H5N1 influenza.
- b. Clusters of avian influenza A (H5N1) or another novel strain of influenza in small, well-defined settings, such as a military base.
- c. Cases of laboratory exposure to avian influenza A (H5N1) or influenza viruses with the potential to cause a pandemic (e.g., influenza A [H2N2]).

Decisions on whether to trace a patient's contacts and how to manage them will be made on a case-by-case basis by the RMO and/or FSHP, in consultation with DOS/MED and CDC, taking into consideration:

- a. Likelihood that the suspected case is due to a novel influenza strain (based on symptoms and travel history, if laboratory results are not yet available)
- b. Likelihood that the causative virus is transmitted from person-to-person with a moderate or high efficiency (as reflected in the designated Pandemic Alert phase)
- c. Feasibility of conducting contact-tracing given the short incubation period for influenza and paucity of available personnel to conduct this activity

A patient's close contacts may include family, friends, work colleagues, classmates, fellow passengers, and/or healthcare providers. Management of contacts might include passive or active monitoring without activity restrictions and/or quarantine at home or in a designated facility. In the Pandemic Alert Period, especially during Phase 3 or 4 when little or limited person-to-person transmission has been documented, **quarantine of contacts should be implemented only when there is a high probability that the ill patient is infected with a novel influenza strain that may be transmitted to others.**

Contacts who are quarantined should be monitored by a DOS/MED healthcare provider (or designee) at least once a day—by phone or in person—to assess symptoms and address any needs. Frequent monitoring (e.g., twice a day) will facilitate early detection, reducing the interval between the onset of symptoms and the isolation of the sick person. Early signs of influenza include fever, respiratory symptoms, and chills, rigors, myalgia, headache, or diarrhea. Quarantine may be lifted as soon as the exposed contact has remained without signs or symptoms of disease for a complete incubation period

for influenza disease. (Experience with seasonal influenza suggests the incubation period is 1-4 days, with an average length of 2 days. However, the clinical behavior of a novel influenza virus may be different and could potentially be as long as 10 days. For the purposes of this document, 10 days is referred to as the incubation period; however, mission healthcare personnel and post management should be prepared to adjust the time frame as more is known about the virus.

3. Data collection

Public health officials or designees should collect information on cases and contacts, including:

- a. Number of contacts identified per case
- b. Information on each contact:
  - (1.) Relationship to the case-patient
  - (2.) Nature and time of exposure
  - (3.) Whether the contact was vaccinated or on antiviral prophylaxis
  - (4.) Underlying medical conditions
  - (5.) Number of contacts (including any in quarantine) that become ill
  - (6.) Number of days between onset of symptoms and reporting to health officials

These data will guide decision-making on whether to implement more stringent containment measures. These tasks may fall outside the responsibilities of DOS overseas medical providers.

- C. Containment of small clusters of infection with novel strains of influenza
- Community-based control measures that DOS/MED and its overseas healthcare providers might use to contain small clusters of infection with novel strains of influenza (during the later Pandemic Alert phases or when cases are first introduced into the U.S.) include targeted chemoprophylaxis and early detection of new cases by use of influenza hotlines and clinics. These approaches may be implemented in small, well-defined settings. They are not likely to be useful once a pandemic is underway.

1. Targeted chemoprophylaxis of disease clusters

This intervention includes investigation of disease clusters, administration of antiviral treatment to persons with confirmed or suspected pandemic influenza, and provision of drug prophylaxis to all likely exposed persons in the affected community. CDC and DOS/MED will assist RMOs and FSHPs in these efforts, as needed. Targeted chemoprophylaxis also requires intensive disease surveillance to ensure coverage of the entire affected area, effective communication with the affected community, and rapid distribution and administration of antivirals because they are most effective when provided within 48 hours of symptom onset or when used as post-exposure prophylaxis before onset of illness. Antivirals from DOS/MED provided stockpiles are not to be used in this effort, as they are contractually limited to treated cases that arise during a pandemic.

## 2. Influenza hotlines and clinics

During the later phases of a Pandemic Alert, in a community experiencing a disease cluster, a combination of self-assessment and establishment of influenza hotlines may be effective in detecting potential influenza disease and conducting “community triage” to direct persons with symptoms to the appropriate site and level of care. This intervention includes asking all members of the affected community to monitor their symptoms in accordance with instructions from DOS/MED and CDC. For example, all members of the community might be asked to take their temperature (and the temperature of their household members) once or twice daily. Persons with temperatures above a certain level may be asked to either stay home and phone a designated influenza hotline for a medical referral, or proceed to the mission health unit or designated influenza screening location established by mission healthcare personnel. Healthcare workers at the health unit will determine whether the patient’s symptoms are likely due to pandemic influenza, to a different contagious disease, or to a noncontagious condition. If a person is judged likely to be infected with pandemic influenza, they will be referred for isolation and care as needed. Clinic personnel should be prepared to keep records and report cases, as requested, by DOS/MED and CDC.

## IV. Recommendations for the Pandemic Period

- A. During the Pandemic Period, control measures such as contact tracing and quarantine applied to individuals may have limited impact in decreasing influenza transmission. In addition, individual-level measures may no longer be feasible. During this stage, mission health unit personnel should consider measures that decrease social contact within groups or whole communities (e.g., self-shielding, cancellation of public events, “snow days”) and measures that individuals can take personally to decrease their risk of infection.

These begin with containment activities for individuals and move on, as needed, to community-based measures. Depending on the specific circumstances of an epidemic, these steps may not necessarily be taken in sequential order:

### 1. Patient isolation

As noted above, a patient with a suspected or confirmed case of pandemic influenza should be separated from persons who are well, using infection control measures described in Supplement 4. If a surge in patients overwhelms local healthcare capacity, including the local mission health unit, or if home isolation is not feasible, health unit personnel may need to use alternative facilities for isolation of influenza patients. Guidance on use of alternative facilities for isolation of influenza patients is as follows:



a. Home isolation

Ideally, persons who meet the criteria for a case of pandemic influenza and who do not require hospitalization for medical reasons should be isolated in their homes. The home environment is less disruptive to the patient's routine than isolation in a hospital or other community setting. If feasible—especially during the earliest stages of a pandemic—a home being considered as an isolation setting should be evaluated by an appropriate health authority, which could be the RMO, FSHP, Post Medical Advisor, or other designee to verify its suitability. The assessment should center on the following minimum standards for home isolation of an influenza patient:

- (1.) Functioning telephone
- (2.) Electricity
- (3.) Heating, ventilation, and air conditioning (HVAC)
- (4.) Potable water
- (5.) Bathroom with commode and sink
- (6.) Waste and sewage disposal (septic tank, community sewage line)
- (7.) Ability to provide a separate bedroom for the influenza patient
- (8.) Accessible bathroom in the residence; if multiple bathrooms are available, one bathroom designated for use by the influenza patient
  - Resources for patient care and support:
    - o Primary caregiver who will remain in the residence and who is not at high risk for complications from influenza disease
    - o Meal preparation
    - o Laundry
    - o Banking
    - o Essential shopping
    - o Social diversion (e.g., television, radio, Internet access, reading materials)
    - o Masks, tissues, hand hygiene products, and information on infection control procedures
    - o Educational material on proper waste disposal

b. Isolation in a community-based facility

When persons requiring isolation cannot be accommodated either at home or in a healthcare facility, a community-based isolation facility will be required. The availability of a community-based facility will be particularly important during a large outbreak (See also <http://www.ahrq.gov/research/altsites.htm>). Much of the work in identifying and evaluating potential sites for isolation should be conducted in advance of an outbreak as part of preparedness planning. Each mission should assemble a team (e.g., including RMO/FSHP, RMO/P, GSO, and a management officer, as available) to identify appropriate locations and resources for

community influenza isolation facilities, establish procedures for activating them, and coordinate activities related to patient management. The team should consider the use of both existing and temporary structures. Options for existing structures include community centers, apartments, schools, dormitories, and hotels. Options for temporary structures include trailers, barracks, and tents.

Considerations include:

(1.) Basic infrastructure requirements

- Functioning telephone system
- Electricity
- Heating, ventilating, and air conditioning (HVAC)
- Potable water
- Bathroom with commode and sink
- Waste and sewage disposal (septic tank, community sewage line)
- Multiple rooms for housing ill patients (individual rooms are preferred) and perhaps a family member

(2.) Access considerations:

- Proximity to U.S. mission
- Parking
- Ease of access for delivery of food and medical and other supplies
- Basic security

(3.) Space requirements:

- Offices/areas for clinical and administrative staff
- Holding area for contaminated waste and laundry
- Laundry facilities (on- or off-site)
- Meal preparation (on- or off-site)
- Social support resources
- Television and radio
- Reading materials

(4.) To determine priorities among available facilities, consider these features:

- Separate rooms for patients or areas amenable to isolation of patients with minimal construction
- Feasibility of controlling access to the facility and to each room
- Availability of potable water, bathroom, and shower facilities
- Facilities for patient evaluation, treatment, and monitoring
- Capacity for providing basic needs to patients
- Rooms and corridors that are amenable to disinfection
- Facilities for accommodating staff
- Facilities for collecting, disinfecting, and disposing of infectious waste
- Facilities for collecting and laundering infectious linens and clothing
- Ease of access for delivery of patients and supplies

- Legal/property considerations

## 2. Patient quarantine

### a. Home quarantine

A person's residence is generally the preferred setting for quarantine. As with isolation, home quarantine is often least disruptive to a person's routine. Because persons who have been exposed to influenza may need to stay in quarantine for as long as 10 days (may be modified based on information about the virus), it is important to ensure that the home environment meets the individual's ongoing physical, mental, and medical needs. An evaluation of the home for its suitability for quarantine should be performed, ideally before the person is placed in quarantine. This evaluation may be performed on site by a health official or designee. However, from a practical standpoint, it may be more convenient to evaluate the residence through the administration of a questionnaire to the individual and/or the caregiver. Factors to be considered in the evaluation include:

- (1.) Basic utilities (water, electricity, garbage collection, and heating or air-conditioning as appropriate)
- (2.) Basic supplies (clothing, food, hand-hygiene supplies, laundry services)
- (3.) Mechanism for addressing special needs (e.g., filling prescriptions)
- (4.) Mechanism for communication, including telephone (for monitoring by health staff, reporting of symptoms, gaining access to support services, and communicating with family)
- (5.) Accessibility to healthcare workers or ambulance personnel
- (6.) Access to food and food preparation
- (7.) Access to supplies such as thermometers, fever logs, phone numbers for reporting symptoms or accessing services, and emergency numbers (these can be supplied by health authorities if necessary)
- (8.) Access to mental health and other psychological support services.

### b. Quarantine in a community-based facility

Although the home is generally the preferred setting for quarantine, alternative sites for quarantine may be necessary in certain situations. For example, persons who do not have a home situation suitable for this purpose or those who require quarantine away from home (e.g., during travel) will need to be housed in an alternative location. Because persons who have been exposed to influenza may require quarantine for as long as 10 days, it is important to ensure that the environment is conducive to meeting the individual's ongoing physical, mental, and medical needs. Ideally, one or more community-based facilities that could be used for quarantine should be identified and evaluated as part of influenza preparedness planning. The evaluation should be performed on site by a mission health official or designee.

Additional considerations, beyond those listed above for home quarantine, include:

- (1.) Adequate rooms and bathrooms for each contact
- (2.) Delivery systems for food and other needs
- (3.) Staff to monitor contacts at least daily for fever and respiratory symptoms
- (4.) Transportation for medical evaluation for persons who develop symptoms
- (5.) Mechanisms for communication, including telephone (for monitoring by health staff, reporting symptoms, gaining access to support services, and communicating with family)
- (6.) Adequate security for those in the facility
- (7.) **Services for removal of waste.** No special precautions for removal of waste are required as long as persons remain asymptomatic.

2. Management of contacts

Contact tracing, contact monitoring, and quarantine of close contacts may be effective only in special situations during the earliest stages of a pandemic. Because the usefulness and feasibility of these measures will be limited once the pandemic has started to spread, mission health providers should consider community-based measures that reduce disease transmission by increasing social distance.

B. Community-based containment measures

If disease transmission in the community is significant and sustained, mission healthcare providers should consider implementing community-based containment measures. CDC will promote an active process of engagement and discussion to help DOS/MED and healthcare providers decide what actions to take as the situation evolves. Community-based containment measures can be grouped into two broad categories: measures that affect groups of exposed or at-risk persons and measures that affect entire communities. Social considerations—including levels of community cooperation and mobility—will also inform local decision-making.

1. Measures that affect groups of exposed or at-risk persons include:

- Quarantine of groups of exposed persons
- Containment measures that apply to use of specific sites or buildings

These measures should be considered when:

- There is limited disease transmission in the area.
- Most cases can be traced to contact with an earlier case or exposure to a known transmission setting (e.g., a school or workplace where a person has fallen ill).
- The intervention is likely to either significantly slow the spread of infection or to decrease the overall magnitude of an outbreak in the community.

a. Quarantine of groups of exposed persons

The purpose of quarantine is to reduce influenza transmission by separating exposed persons from others, monitoring exposed persons for symptoms, and providing medical care and infection control precautions as soon as symptoms are detected. Groups that might be quarantined include:

Persons who might have been exposed to an influenza case:

- (1.) Via family members
- (2.) At a public gathering
- (3.) On an airplane or cruise ship or other closed conveyance
- (4.) At their school or workplace
- (5.) Healthcare providers who work at a facility where influenza cases receive care
- (6.) Group quarantine (like patient isolation) is optimally performed on a voluntary basis, in accordance with instructions of healthcare providers and health officials. However, many levels of government (local, state, federal) have the basic legal authority to compel mandatory isolation and quarantine of individuals and groups when necessary to protect the community's health. Such authorities in the overseas setting remain to be defined.

b. Measures that apply to use of specific sites or buildings

Two ways of increasing social distance activity restrictions are to cancel events and close buildings or to restrict access to certain sites or buildings. These measures are sometimes called "focused measures to increase social distance." Depending on the situation, examples of cancellations and building closures might include:

- Cancellation of public events (concerts, sports events, movies, plays)
- Closure of recreational facilities (community swimming pools, youth clubs, gymnasiums)

2. Measures that affect entire communities (including both exposed and non-exposed persons), include:

- Promotion of community-wide infection control measures (e.g., respiratory hygiene/cough etiquette)
- "Snow days" and self-shielding
- Closure of office buildings, shopping malls, schools, and public transportation
- Widespread community quarantine (*cordon sanitaire*)

Measures that affect whole communities should be considered when:

- There is moderate to extensive disease transmission in the area.
- Many cases cannot be traced to contact with an earlier case or known exposure.
- Cases are increasing among contacts of influenza patients.
- There is a significant delay between the onset of symptoms and the isolation of cases because of the large number of ill persons.

As community outbreaks of pandemic influenza occur, community-wide infection control measures may decrease the overall magnitude of the outbreak.

a. Community-wide infection control measures

Throughout a pandemic, public health authorities will encourage all persons with signs and symptoms of a respiratory infection, regardless of presumed cause, to:

- (1.) Cover the nose/mouth when coughing or sneezing.
- (2.) Use tissues to contain respiratory secretions.
- (3.) Dispose of tissues in the nearest waste receptacle after use.
- (4.) Perform hand hygiene after contact with respiratory secretions and contaminated objects or materials.

Persons at high risk for complications of influenza will be advised to avoid public gatherings (e.g., movies, religious services, public meetings) when pandemic influenza is in the community. They should also avoid going to other public areas (e.g., food stores, pharmacies); the use of other persons for shopping or home delivery service is encouraged.

Disposable **surgical-type masks** are used by healthcare workers taking care of ill patients to prevent splashes and droplets of potentially infectious material (e.g., from coughs and sneezes) from reaching the mucous membranes of the healthcare worker's nose or mouth. The benefit of wearing masks by well persons in public settings has not been established and is not recommended as a public health control measure at this time. In contrast to healthcare workers who necessarily have close contact with ill patients, the general public should try to avoid close contact with ill individuals. Nevertheless, persons may choose to wear a mask as part of individual protection strategies that include cough etiquette, hand hygiene, and avoiding public gatherings. Mask use may be most important for persons who are at high risk for complications of influenza and those who are unable to avoid close contact with others or must travel for essential reasons such as seeking medical care. Public education should be provided on how to use and dispose of masks appropriately. In addition, this education should emphasize that mask use is not a substitute for social distancing or other personal protection measures (see also Supplement 4). Supply issues should be considered so that mask use in communities does not limit availability for healthcare settings where the importance and effectiveness of this use has better documented.

b. Snow days and self-shielding

Implementation of “snow days”—asking everyone to stay home—involves the entire community in a positive way, is acceptable to most people, and is relatively easy to implement. Snow days may be instituted for an initial 10-day period, with final decisions on duration based on an epidemiological and social assessment of the situation. Post management may wish to consider recommendations to the mission community for acquisition and storage of necessary provisions including type and quantity of

supplies needed during snow days. Snow days can effectively reduce transmission without explicit activity restrictions (i.e., quarantine). Consideration should be given to personnel who maintain primary functions in the community (e.g., regional security personnel, motor pool workers, GSO workers [electricity, water, gas, telephone, sanitation]). Compliance with snow days might be enhanced by “self-shielding” behavior (i.e., many people may stay home even in the absence of an official snow day [“reverse quarantine”]).

c. Closure of office buildings, shopping malls, schools, and public transportation

Closure of mission office buildings, stores, and motor pools may be feasible community containment measures during a pandemic. All of these have significant impact on the community and workforce, however, and careful consideration should be focused on their potential effectiveness, how they can most effectively be implemented, and how to maintain critical supplies and infrastructure while limiting community interaction. Although data are limited, school closures may be effective in decreasing spread of influenza and reducing the overall magnitude of disease in a community. In addition, the risk of infection and illness among children is likely to be decreased, which would be particularly important if the pandemic strain causes significant morbidity and mortality among children. Children are known to be efficient transmitters of seasonal influenza and other respiratory illnesses. Anecdotal reports suggest that community influenza outbreaks may be limited by closing schools. Results of mathematical modeling also suggest a reduction of overall disease, especially when schools are closed early in the outbreak. Many experts feel this is the best single measure for reducing community spread of Pandemic Influenza. During a Pandemic Period, parents should be encouraged to consider childcare arrangements that do not result in large gatherings of children outside the school setting.

d. Widespread community quarantine (cordon sanitaire)

In extreme circumstances, mission healthcare personnel and post management, in consultation with DOS/MED may consider the use of widespread or community-wide quarantine, which is the most stringent and restrictive containment measure. Strictly speaking, “widespread community quarantine” is a misnomer, since “quarantine” refers to separation of exposed persons only and (unlike snow days) usually allows provision of services and support to affected persons. Like snow days, widespread community quarantine involves asking everyone to stay home. It differs from snow days in two respects:

- (1.) It may involve a legally enforceable action, and
- (2.) It restricts travel into or out of an area circumscribed by a real or virtual “sanitary barrier” or “*cordon sanitaire*”

except to authorized persons, such as public health or healthcare workers.

Implementation of this measure during a pandemic is unlikely to prevent the introduction or spread of pandemic disease except in uncommon or unique circumstances (such as in a community able to be completely self-sufficient). In many cases, other less restrictive approaches such as snow days can be implemented to slow disease spread or decrease its magnitude in a community. Because of this, *cordon sanitaire* is not recommended during a pandemic unless a community is in a setting where it is likely to be applied effectively and has planned with neighboring jurisdictions how such an approach would be implemented and maintained during a pandemic.

3. Scaling back community containment measures

The decision to discontinue community-level measures must balance the need to lift individual movement restrictions against community health and safety. Premature removal of containment strategies can increase the risk of additional transmission.

Decisions should be based on evidence of improving local/regional control, such as:

- a. Consistent decrease in the number of confirmed cases
- b. Reduction in the number of probable and known cases
- c. Effective protective countermeasures are in place (e.g., high coverage with a pandemic influenza vaccine)

General recommendations are to withdraw the most stringent or disruptive measures first (e.g., widespread community quarantine, snow days, mass transit interruptions).

For more details regarding interventions for community containment that includes passive and active monitoring, working quarantine and social distancing, please see Appendix 1, Supplement 8, HHS Pandemic Influenza Plan.

<http://www.hhs.gov/pandemicflu/plan/pdf/S08.pdf>

Table 1: Graded Community Containment Measures

<i>Level of influenza activity</i>	<b>Response</b>
No novel influenza strains of public health concern in global circulation	Preparedness planning
Limited novel influenza virus <sup>transmission</sup> abroad; all local cases are either imported or have clear epidemiological links to other cases	Quarantine of close contacts
Limited novel influenza virus transmission in the area, with either a small number of cases without clear epidemiological links to other cases or with increased occurrence of influenza among their close contacts	Quarantine of close contacts
Sustained novel influenza virus transmission in the area, with a large number of cases without	Focused measures to increase social distance; consider community-based measures



clear epidemiological links to other cases; control measures aimed at individuals and groups appear to be effective	
Sustained novel influenza activity in the area, with a large number of cases in persons without an identifiable epidemiological link at the time of initial evaluation; control measures are believed to be ineffective	Community-level measures to increase social distance; consider snow days and community-wide quarantine
Decreases in the number of new cases, unlinked (or “unexpected”) cases, and generations of transmission	Quarantine of contacts
Transmission has been controlled or eliminated; no new cases reported	Active monitoring in high-risk populations; continue for 2-3 incubation periods after control or elimination of transmission.

## Appendix 1.

### Frequently Asked Questions About Quarantine (ref. HHS Pandemic Influenza Plan)

#### **If an influenza pandemic occurs, will U.S. overseas missions be quarantined?**

Community-wide quarantine is only one of a spectrum of actions that may be considered during an influenza pandemic overseas. When the epidemiology of the outbreak indicates a need for stronger measures, missions can adopt a voluntary quarantine approach and reserve compulsory measures for only extreme situations. When an outbreak progresses to include large numbers of cases for which no epidemiological linkages can be identified, community-level interventions may become necessary. Even at this stage, however, measures designed to increase social distance, such as snow days, may be preferred alternatives to quarantine. Wider use of quarantine is generally reserved for situations in which all other control measures are believed to be ineffective. The choice of containment measures requires frequent and ongoing assessment of an outbreak and evaluation of the effectiveness of existing control measures.

#### **Does the effectiveness of containment measures require 100% compliance?**

No. Containment measures, including quarantine, are effective even if compliance is less than 100%. Although high compliance is worth striving for, even partial or “leaky” quarantine can reduce transmission. Therefore, strict enforcement is not always needed; in most cases, jurisdictions can rely on voluntary cooperation. The incremental benefit of quarantine approaches a maximum at a compliance rate of approximately 90%, with little additional benefit from higher rates of compliance. Therefore, containment measures can be important components of the response to a communicable disease outbreak even when compliance is not 100%.

#### **Does “quarantine” always mean using a legal order to restrict someone’s activity?**

No. The term “quarantine” is often defined narrowly to refer to the legally mandated separation of well persons who have been exposed to a communicable disease from those who have not been exposed. Although the precise legal definition of quarantine may differ from jurisdiction to jurisdiction, when used clinically or programmatically, quarantine may be defined more broadly to include all interventions, both mandatory and voluntary, that restrict the activities of persons exposed to a communicable disease. Therefore, whenever an exposed person is placed under a regimen of monitoring that includes an activity restriction, even when those restrictions are voluntary, the person is said to be under quarantine.

#### **Must quarantine be mandatory to be effective?**

Although the federal government and nearly all states have the basic legal authority to place persons exposed to certain communicable diseases under quarantine and enforce the required restrictions on activity, use of this authority may not always be necessary or practical. Previous experiences with the use of quarantine, including those during the 2003 SARS outbreak, suggest that the majority of persons comply voluntarily with requests from health authorities to remain in quarantine and observe the recommended activity restrictions. In the event voluntary measures are not successful, it may be necessary to implement mandatory containment measures, although the legal authorities for imposing these measures needs further elucidation by L.

### **Does being placed in quarantine increase a person's risk for acquiring disease?**

One of the fundamental principles of modern quarantine is that persons in quarantine are to be closely monitored so that those who become ill are efficiently separated from those who are well. A second principle is that persons in quarantine should be among the very first to receive any available disease-prevention interventions. Adherence to these two principles of modern quarantine should prevent an increase in risk for acquiring disease while in quarantine.

### **Is quarantine really necessary if everyone who develops symptoms is rapidly placed in isolation?**

Although theoretically true, it would be unrealistic to believe that even the most efficient system for initiation of isolation will minimize delays to the extent required to prevent transmission. Among the factors contributing to delays in recognition of symptoms are the insidious nature of disease onset and denial that symptoms have developed. Early in the 2003 SARS outbreak in Singapore, the average delay from onset of symptoms to initiation of isolation was 7 days. Officials were able to reduce this delay only to 3 days, even with an aggressive public awareness campaign on the importance of symptom recognition and isolation. Quarantine helps to reduce transmission associated with delays in isolation in two ways. First, quarantine enables health officials to quickly locate symptomatic persons who should be placed in isolation. Second, although quarantine locations may not be as efficient as isolation facilities in preventing transmission, quarantine reduces the number of persons who might be exposed while awaiting transfer to an isolation facility. If quarantine was not used, symptomatic and infectious persons could move about freely in public places, potentially exposing large numbers of additional persons and thereby fueling the outbreak.

### **Is quarantine useful only for diseases that are spread by the airborne route?**

No. Quarantine simply refers to the separation and restriction of activity of persons exposed to a communicable disease who are not ill. It is designed to minimize interactions between those exposed to a disease and those not yet exposed. As such, quarantine can be used for any disease that is spread from person to person. In practice, however, because of the activity restrictions associated with quarantine, the intervention is generally reserved for diseases like SARS or pandemic influenza that are easily and rapidly spread from person to person. The indication for quarantine for diseases purely transmitted by the airborne route is clear. However, this tool can also be useful where

transmission can occur through close personal contact with secretions or objects contaminated by an ill person. Smallpox is an excellent example of a disease where quarantine can be effective in controlling spread although transmission may occur by means other than the airborne route.

### **Will the public accept the use of quarantine?**

Yes. The negative connotations associated with quarantine likely stem from its misuse or abuse in the past. Although inappropriate use of quarantine, either voluntary or mandatory, would not and should not be accepted by the public, efforts should be made to gain public acceptance when use of this measure is indicated. Experiences with the use of quarantine during the SARS outbreaks of 2003 suggest that public acceptance of quarantine may be greater than previously thought. For example, during the 2003 SARS outbreak in Canada, almost all persons asked to observe quarantine restrictions did so willingly, with only a small number requiring a legal order to gain cooperation. In all cases, cooperation and acceptance was achieved through clear and comprehensive communication with the public about the rationale for use of quarantine.

## **Appendix 2.**

### **Recommendations for Quarantine**

(Note: Recommendations on patient isolation are provided in Supplement 3.)

#### **General considerations**

- Monitor each quarantined person daily, or more frequently if feasible, for fever, respiratory symptoms, and other symptoms of early influenza disease.
- Monitor compliance with quarantine through daily visits or telephone calls.
- Provide a hotline number for quarantined persons to call if they develop symptoms or have other immediate needs.
- If a quarantined person develops symptoms suggestive of influenza, arrangements should be in place for separating that person from others in quarantine and ensuring immediate medical evaluation.
- Provide persons in quarantine with all needed support services, including 1) psychological support, 2) food and water, 3) household and medical supplies, and 4) care for family members who are not in quarantine. Financial issues, such as medical leave, may also need to be considered.
- As resources and personnel allow, collect data related to quarantine activities to guide ongoing decision-making including information on each person quarantined:
  - o Relationship to the case-patient
  - o Nature and time of exposure
  - o Whether the contact was vaccinated or on antiviral prophylaxis or using PPE
  - o Underlying medical conditions
  - o Number of days in quarantine
  - o Symptom log
  - o Basic demographics
  - o Compliance with quarantine

- Based on current available data, the recommended duration of quarantine for influenza is generally **10 days** from the time of exposure. (This period may be adjusted based on available information during a pandemic.) At the end of the designated quarantine period, contacts should have a final assessment for fever and respiratory symptoms. Persons without fever or respiratory symptoms may return to normal activities.

#### Home quarantine

Whenever possible, contacts should be quarantined at home. Home quarantine requires the fewest additional resources, although arrangements must still be made for monitoring patients, reporting symptoms, transporting patients for medical evaluation if necessary, and providing essential supplies and services. Home quarantine is most suitable for contacts with a home environment that can meet their basic needs and in which unexposed household members can be protected from exposure. Other considerations include:

- Persons in home quarantine must be able to monitor their own symptoms (or have them monitored by a caregiver).
- The person's home should be evaluated for suitability before being used for quarantine, using a questionnaire administered to the quarantined person or the caregiver.
- Quarantined persons should minimize interactions with other household members to prevent exposure during the interval between the development and recognition of symptoms. Precautions may include 1) sleeping and eating in a separate room, 2) using a separate bathroom, and 3) appropriate use of personal protective equipment (see Supplement 4).
- Persons in quarantine may be assessed for symptoms by either active or passive monitoring. Active monitoring of contacts in quarantine may overcome delays resulting from the insidious onset of symptoms or denial among those in quarantine.
  - Definition of active monitoring: A healthcare or public health worker evaluates the contact on a regular (at least daily) basis by phone and/or in person for signs and symptoms suggestive of influenza
  - Definition of passive monitoring: The contact is asked to perform self-assessment at least twice daily and to contact authorities immediately if respiratory symptoms and/or fever occur.
- Household members may go to school, work, etc., without restrictions unless the quarantined person develops symptoms. If the quarantined person develops symptoms, household members should remain at home in a room separate from the symptomatic person and await additional instructions from health authorities.
- Household members can provide valuable support to quarantined persons by helping them feel less isolated and ensuring that essential needs are met.
- Immediate and ongoing psychological support services, where available, should be provided to minimize psychological distress.
- Quarantined persons should be able to maintain regular communication with their loved ones and healthcare providers.

#### Quarantine in designated facilities

In some cases, affected persons may not have access to an appropriate home environment for quarantine. Examples include travelers; persons living in dormitories, homeless

shelters, or other group facilities; and persons whose homes do not meet the minimum requirements for quarantine. In other instances, contacts may have an appropriate home environment but may not wish to put family members at risk. In these situations, health officials should identify an appropriate community-based quarantine facility. Monitoring of quarantined persons may be either passive or active, although active monitoring may be more appropriate in a facility setting. Facilities designated for quarantine of persons who cannot or choose not to be quarantined at home should meet the same criteria listed for home quarantine. Evaluation of potential sites for facility-based quarantine is an important part of preparedness planning.

#### Working quarantine

This type of quarantine applies to healthcare workers or other essential personnel who are at occupational risk of influenza infection. These groups may be subject to quarantine either at home or in a designated facility during off-duty hours. When off duty, contacts on working quarantine should be managed in the same way as persons in quarantine at home or in a designated facility. A mechanism should be developed that will:

- Monitor persons in working quarantine for symptoms during work shifts
- Promptly evaluate anyone who develops symptoms
- Provide transportation to and from work, if needed
- Develop mechanisms for immediate and ongoing psychological support

At the end of the designated quarantine period, contacts should receive physical (fever and respiratory symptoms) and psychological health assessments. However, in the case of healthcare workers who might be continually occupationally exposed during a 6-12 week wave, working quarantine may be prolonged. Once exposure ends and the designated quarantine period is finished, persons without fever or respiratory symptoms may return to normal activities. Persons who exhibit psychological distress should be referred to mental health professionals, if available, for additional support services.

## **Supplement Nine: Travel-Related Risk of Disease Transmission**

### **Executive Summary**

This supplement addresses the travel related containment measures that air- and sea-ports may adopt should there be human-to-human transmission of highly pathogenic influenza. The goal of these measures is to limit the spread of disease. The measures would likely vary from country to country but could include: isolation and quarantine of certain travelers; travel restrictions; transit denial to individuals or groups; border closings; and importation bans (e.g. on pet birds).

MED does not envision a significant role for overseas Health Units in the design or implementation of such containment measures; however the impact of such measures upon an Embassy's patient population – both those arriving to Post or those trying to leave the Post – could be substantial, hence familiarity with the measures is important.

Domestically, Department of State employees will be subject to the same travel implementations that any other US traveler will experience and these will be directed by authorities such as HHS, CDC, Coast Guard, FAA, and others.

### **Summary**

This supplement addresses the travel related containment measures that air- and sea-ports may adopt should there be human-to-human transmission of highly pathogenic influenza that may effect personnel in U.S. overseas missions. The goal of these measures will be to limit the spread of disease. Measures will likely vary from country to country but could include: isolation and quarantine of certain travelers; travel restrictions; transit denial to individuals or groups; border closings; and importation bans (e.g. on pet birds).

MED does not envision a significant role for overseas Health Units in the design or implementation of such containment measures; however the impact of such measures upon an Embassy's patient population – both those arriving to Post or those trying to leave the Post – could be substantial, hence familiarity with the measures is important.

### **I. Rationale**

The 2003 pandemic of severe acute respiratory syndrome (SARS) demonstrated how quickly human respiratory viruses can spread, especially in a world of *modern air travel*. Disease spread will likely be even faster during an influenza pandemic because a typical influenza virus has a shorter average incubation period (typically 2 days vs. 7-10 days for SARS) and is more efficiently transmitted from person to person. As an influenza pandemic begins, the public health authorities of many countries around the globe might screen *inbound travelers* from affected areas to decrease disease importation into their populations. In countries where a pandemic begins or spreads, local health authorities might screen *outbound passengers* to decrease exportation of disease. Early in a

pandemic, local governments might implement their own travel-related measures to slow disease spread. For approximately 2 days before becoming ill and while ill, infected people will be considered capable of spreading the virus to others. It will not be possible to detect all infected and ill travelers, but attempts to do so might at least slow the spread early in a pandemic, allowing additional time for implementation of other response measures such as vaccination. Once a pandemic is underway, *exit screening* of travelers from affected areas (“source control”) is likely to be more efficient than *entry screening* to identify ill travelers. Early in a pandemic, “entry screening” may decrease disease introduction in any given country. Later, however, as pandemic disease spreads in communities, ongoing indigenous transmission will likely exceed new introductions and, therefore, authorities might modify or discontinue this strategy. Voluntary limitations on travel, as persons decide to limit their own personal risk by canceling nonessential trips, will also decrease the amount of disease spread.

## II. Recommendations for the Interpandemic and Pandemic Alert Periods

- A. Preparedness for implementation of travel-related containment measures  
Travel-related containment measures could include:
1. Identification of ill travelers
  2. Isolation of ill travelers
  3. Quarantine of close contacts

- B. Health information for travelers  
CDC’s Travelers’ Health website ([www.cdc.gov/travel/](http://www.cdc.gov/travel/)) will provide up-to-date travel notices for international travelers to countries affected by novel influenza viruses. These notices are issued depending on the scope, risk for travelers, and recommended preventive measures. Four types of travel notices can be issued: ***In the News, Outbreak Notices, Travel Health Precautions, and Travel Health Warnings.***

State Department travelers also have access to specific DOS/MED health information via any internet enabled connection via the DOS/Travax EnCompass website ([www.travax.com](http://www.travax.com)).

- C. Evaluation of travel-related cases of infection with novel strains of influenza  
During the Pandemic Alert Period, travel-related cases of infection might be detected after entry into any given locale or reported during transit by airline or cruise ship personnel before arrival of an ill passenger.
1. Protocols for managing ill travelers at ports of entry  
If an official American is ill with a suspected case of novel influenza aboard an arriving airplane or cruise ship, the medical provider at Post should do the following:
    - a. All partners should be notified, including the nearest Quarantine station (if available), local authorities, and DOS/MED.



- b. Request information on the ill passenger's symptoms and travel/exposure history to make an initial assessment as to how likely it is that they have a novel influenza infection. This information should be documented on the case reporting forms (see Supplement 1).
  - c. Decide if the DOS healthcare provider should meet the airplane or cruise ship to further evaluate the ill traveler in coordination with local public health or quarantine officers. Use appropriate infection control procedures, as needed (e.g., separate the ill passenger as much as possible from other passengers; provide the ill passenger with a mask or tissues to cover coughs and sneezes).
  - c. If the ill passenger meets the clinical and epidemiological criteria for infection with a novel influenza strain, the patient should be sent to a designated health facility, using appropriate infection control procedures for transit and patient isolation (see Supplement 4).
  - d. Health Unit staff should be prepared to provide assistance (when possible and in partnership with appropriate mission sections) to traveling official Americans who are involuntarily put into isolation by a host nation.
2. Managing travel contacts
- a. During the Pandemic Alert Period, especially during the earlier phases, RMOs and FSHPs, in consultation with DOS/MED, should advise quarantine of travel contacts (i.e., passengers, crew, response workers) **only when there is a high probability that the ill passenger is infected with a novel influenza strain that is transmitted between people.**
  - b. If the diagnosis of a novel strain of influenza is confirmed, quarantined persons should be transferred as soon as possible to a pre-designated longer-term quarantine facility or other designated quarantine location and should remain there for the maximum length of the incubation period for influenza. Each quarantined person should be monitored twice a day for fever and other signs of influenza (see Supplement 8).

D. Preventing the importation of infected birds and animals

In general, birds submitted for entry into the United States must be quarantined in USDA-approved facilities. Health Unit staff should warn their patients that this may be a very difficult (and potentially dangerous) time to adopt birds overseas and hope to import them back to the USA. A current listing of CDC's orders banning the importation of birds and bird products that might carry avian influenza A (H5N1) can be found at [www.cdc.gov/flu/avian/outbreaks/embargo.htm](http://www.cdc.gov/flu/avian/outbreaks/embargo.htm).

### III. Recommendations for the Pandemic Period

- A. Over the course of an influenza pandemic, the travel-related control measures that are useful and worth enacting will change. If indigenous transmission is widespread around the globe, the value of preventing more new cases from arriving to any given shore will diminish. Likewise, compulsory restrictions on travel will likely become unnecessary as folks voluntarily put off nonessential travel. MED will promote an active process of engagement and discussion to help Health Unit staff best advise their Missions and their patients regarding the resumption of travel. However, because travel-related measures implemented by one jurisdiction will inevitably affect others, communication, collaboration, and coordination is crucial.

#### 1. Travel into the United States

- a. Early during an influenza pandemic that begins outside the United States, health authorities will heighten disease surveillance at U.S. airports and seaports and maintain close communication with WHO, foreign governments, and the airline industry. Travel-related disease control measures will include:
  - (1.) Managing arriving ill passengers
  - (2.) Using restrictions on travel/isolation and/or quarantine measures if the pandemic is still young and these measures are expected to lessen the disease burden or spread
  - (3.) Issuance of travel health precautions and warnings to notify the public as to their potential risk related to travel
- b. Embassy HU staff hoping to medically evacuate patients (whether it is ILI, influenza, or other severe illness or injury) will communicate with DOS/MED assets, airlines, air ambulance providers and local health authorities as to the advisability/likelihood of success in such a mission.
- c. Embassy EAC committees and healthcare personnel, addressing those non-essential or other personnel hoping to repatriate to the United States or evacuate to another location in order to avoid contracting PI, will have to communicate to them that success of such movement in this setting is far from assured. DOS/MED may recommend that “sheltering in place” is likely to be a more successful strategy than returning to the USA, where PI will also be occurring.
- d. Domestically, DOS/MED will defer to HHS/CDC and state quarantine policies and laws. However, DOS/MED will liaise with FLO in arranging for follow-up screening and surveillance of those employees returning to the USA from an evacuation or other travel.

#### 2. Travel out of the United States

Measures taken would depend upon the magnitude and phase of the pandemic, but, in general, US health authorities will discourage persons who are in the USA and acutely ill with PI or suspected PI from boarding aircraft or ships and potentially exporting the disease elsewhere.

3. Travel within the United States

Some containment measures and travel restrictions to slow disease spread might be enacted, such as isolating ill arriving passengers on domestic flights and quarantining passengers and crew. Or, perhaps there could be closing of mass transit systems (e.g., buses and subways) or interstate bus and train routes.

## **Supplement Ten: Public Health Communications**

### **Executive Summary**

MED will assist other Department of State Bureaus and divisions in the coordination, planning and implementation of pandemic influenza communications. The communications and public outreach strategy for Pandemic Influenza is designed to prepare DOS domestic and overseas citizens and communities for a pandemic; communicate the need for local preparedness and an understanding of the implications of a pandemic; and develop consistent, clear, honest messages and materials that can be shared broadly in the U.S. and with global partners.

Components of the strategy include:

- 1) Assessment of current public (or community) knowledge through ongoing surveillance of media and surveys of the public and providers;
- 2) Development of materials such as message maps (EAC Tripwires, CA Warden Messages) that have been developed and tested in focus groups;
- 3) Formative audience research;
- 4) Cross-government communication coordination (host and international);
- 5) Facilitating community and business continuity planning by helping these sectors communicate with their constituents and prepare;
- 6) Public engagement through forums and stakeholder meetings on such important policy issues as allocation of limited drugs and vaccines;
- 7) Web communications development through consolidated and centralized DOS/MED and overseas missions' websites;
- 8) International outreach to support our global partners, in cooperation with the WHO Secretariat;
- 9) Continuing efforts to raise awareness about the importance of seasonal influenza vaccine and to promote increased yearly compliance of influenza and pneumococcal vaccination.

These efforts provide a framework for DOS/MED and overseas missions on how to bring in a wide range of stakeholders to open a transparent discussion of how to prepare and react to Pandemic Influenza in the domestic and overseas setting. We have developed the following guidance for communication efforts based on WHO Phases, Interpandemic and Pandemic Periods, as has been outlined by the HHS Pandemic Plan.

### **I. Rationale**

Communications activities based on scientifically derived risk communications principles are an integral part of a comprehensive public health response before, during, and after an influenza pandemic. Effective communication guides the public, the news media, healthcare providers, and other groups in responding appropriately to outbreak situations and complying with public health measures.

## II. Overview

Communications preparedness for an influenza pandemic should follow key risk communications concepts:

- A. During an influenza pandemic, people need information about what is known and unknown and interim guidance to formulate decisions to help protect their health and the health of others.
- B. Coordination of message development and release among DOS Missions CDC, WHO and local health officials is critical to help avoid fear and anxiety, and impede response measures.
- C. Technically correct and succinct information presented during an influenza pandemic will minimize speculation and avoid over-interpretation of data, overly confident assessments of investigations and control measures.
- D. The influenza pandemic will generate immediate, intense, and sustained demand for information from the public, healthcare providers, policy makers, and news media.
- E. Dissemination of timely, transparent, accurate, science-based information about pandemic influenza and the progress of the response can build public trust and confidence.

During the Interpandemic Period, DOS Missions' communications and healthcare professionals should work together to focus on preparedness planning to build flexible, sustainable communications networks. During the Pandemic Period, they should focus on well-coordinated health communications to support public health interventions designed to help limit influenza-associated morbidity and mortality.

## III. Recommendations for the Interpandemic and Pandemic Alert Periods

- A. Assessing communications capacity and needs
  - 1. Capacity
    - a. Develop a phased risk communications plan.
    - b. Assess the availability of adequate human and fiscal resources.
    - c. Establish procedures to ensure that technology infrastructure is in place and integrated into planning for pandemic influenza.
    - d. Prepare for surge capacity by developing and updating backup plans and procedures with community resources while training extra staff for emergency communications responsibilities.
    - e. Ensure proficiency among all staff engaged in a pandemic response considering personnel changes and reorganization.
  - 2. Needs

- a. Update risk communications plans annually to ensure that they remain practical and evidence based. Share the plans in advance with stakeholders.
- b. Identify communications professionals and media spokespersons. They should be familiar with professional counterparts from local/regional jurisdictions or communities to facilitate collaboration.
- c. Key mission officials should be familiar with available communications resources, gaps and plans to deploy staff and resources during an influenza pandemic.
- d. Monitor the effectiveness of risk communication activities, adjusting as necessary to achieve public health communications objectives.

B. Conducting collaborative planning

Collaborative planning should begin as early as possible integrating public and private sectors to ensure sustained communications resources as a pandemic evolves. DOS Missions' interaction with WHO, CDC and other international partners is vital to surveillance and essential information exchange while building a collaborative and consistent messaging strategy. Critical elements of an international response are:

- 1. Coordinate training and preparedness activities; plan for absences of communications personnel due to personal illness or emergencies.
- 2. Coordinate with partner agencies to prepare for public policy and media responses to the pandemic.
- 3. Prepare to address the following topics as a pandemic alert draws near:
  - a. Basic health protection information for target audiences.
  - b. Responsiveness, capabilities, and limitations of the local public health system and alternatives
  - c. Roles and responsibilities of pandemic response stakeholders
  - d. Resources to help people cope with escalating fear, anxiety, grief (see Supplement 11).
  - e. Changing public health procedures and actions during different pandemic phases; the reason unusual steps may be needed to protect public health (quarantines, closures).
  - f. Consider when and how to use private, host country, and WHO assistance when available.
  - g. Identify and engage credible local resources (NGOs, WHO, local overseas CDC representatives, private business, Red Cross) as partners.
  - h. Affirm mechanisms with news media representatives to optimize effective working relationships.
  - i. Ensure that communications professionals have opportunities to participate with health and emergency staff in tabletop exercises and drills to help identify and resolve potential problems.

C. Developing and testing standard DOS domestic and international procedures for disseminating information

The communication processes should be formalized for DOS overseas communication plans and should identify dissemination procedures and channels for forwarding communications from HHS/CDC, WHO, OIE, FAO and other international agencies. As the pandemic unfolds, HHS/CDC and WHO will relay essential information through well-established channels and formats (CDC's Emergency Communication System, EPI-X). To develop effective information dissemination plans for an influenza pandemic, include:

1. Procedures to review and approve PI-related messages and materials.
2. Protocols for frequently updated information, including daily disease activity reports. Include morbidity and mortality figures, geographic location of cases, demographics of infected populations, and the number of persons hospitalized.
3. Maintain a post specific website with current information.
4. Work with DOS information technology (IT) professionals to build emergency websites, if necessary, to manage information requests when needed. Develop communications materials in advance and store them on secure servers. Add the [www.pandemicflu.gov](http://www.pandemicflu.gov) website as a link to local websites.
5. Make overseas mission and Federal hotlines available (CDC-INFO telephone line 1-800-CDC-INFO; 1-800-232-4636). Local hotlines can tailor information to their localities with the Hotline staff trained in advance with access to the [www.pandemicflu.gov](http://www.pandemicflu.gov) website and to a local database of frequently asked questions.
6. Consular Affairs will prepare up-to-date “warden notices” and Travel Warnings to ensure that American Citizens have access to the same information and education as DOS and mission employees.
7. Prepare contingency plans for increased media demands. Locales with possible or early-confirmed cases of PI should prepare for focused media attention from local and international publications, especially from television. Regularly scheduled press briefings (daily) may reduce the volume of inquiries.

Develop and coordinate procedures with other agencies and organizations to avoid duplication when developing and pre-testing messages, and in training media spokespersons.

D. Developing, testing, and disseminating locally tailored Interpandemic messages and materials

The Interpandemic period is the ideal time to identify and learn about target audiences and raise awareness and knowledge of influenza. The need to inform and educate the public, policy-makers, USG employees and others about the threat of a pandemic must be balanced since a pandemic may not occur for many years and it may not be severe. Acknowledgment of uncertainty can help establish appropriate and balanced messages.

This is the time to prepare creditable and understandable communications materials for use during the Pandemic Alert and Pandemic Periods. Answers to the most likely questions can be provided in press releases and fact sheets with specific details inserted later.

1. Concerns will include personal safety, family and pet safety, and the interruption of routine life activities. Unique cultural attitudes of target audiences in mission communities may be barriers to compliance with response plans and should be prepared for.
2. Stigmatization and discrimination (being shunned as a perceived source of contagion) can be especially difficult and dangerous during the PI scenario. (Supplement 11 includes psychosocial factors and issues.)
3. Basic human needs for self-protection and protection of loved ones will have positive and negative impacts on public health efforts. Stress, worry, and fear will be present to varying degrees throughout a pandemic. Communications professionals should work ahead of time with mental health experts-to assess effects of message content on public anxiety, anticipate stressful situations, and plan appropriate counter-messages.
4. To help to develop and disseminate messages and materials about the pandemic, include the following:
  - a. Assess existing resources, including materials and messages for target audiences.
  - b. Maintain current, accessible, and secure communications contact lists and databases.
  - c. Develop information sources on topics of clinical and laboratory diagnostics, infection control practices, isolation and quarantine procedures, stigmatization management, travel control authority, and legal issues that can be adapted from the supplements of this plan.
  - d. Work with local experts to adapt key messages about basic medical treatments, prioritization of high-risk groups, use of antiviral medications, and access to care. DOS/MED and the HHS/CDC will provide communications materials (fact sheets, question-and-answer documents, and training messages) for international missions to use or adapt.
  - e. Adapt education courses and materials into multiple formats for professional audiences. See MED DASHO/AI website for this plan and [www.pandemicflu.gov](http://www.pandemicflu.gov) for materials.
  - f. Develop and test a specific plan to identify and address rumors and misinformation promptly.
  - g. Identify preferred education and training channels for target audiences.
  - h. Ensure the availability of communications products in multiple languages. Some translated materials will be available on the [www.pandemicflu.gov](http://www.pandemicflu.gov) and [www.cdc.gov/flu/](http://www.cdc.gov/flu/) websites. Local post interpreters may need to assist with presentations.



- i. Disseminate messages and materials now to increase the knowledge and understanding of the public, policy-makers, media, and others to distinguish a pandemic virus from seasonal influenza, and what to expect during different phases of a pandemic.
- j. Provide coordinated information on access to help (hotlines, helplines) and self-help (psychological resources, and stress and anxiety management).

#### IV. Recommendations for the Pandemic Period

DOS/MED with HHS will coordinate international information exchange and the coordination of messaging through WHO and other international partners. These messages will be directed to rapid sharing of appropriate, up-to-date information on what is known and unknown about the progression of the outbreak, the possible disruptions to routines and events, and contingency measures. Consistency in messaging across jurisdictions is strongly advised. The primary focus during the Pandemic Period is to provide timely, accurate information by coordinating communications leadership across international localities. These messages will promptly address rumors, misperceptions, stigmatization, and unrealistic expectations about the response capacities of the DOS mission and of public and private healthcare providers.

- A. Activating emergency communications plans  
Decisions to activate formal emergency communication systems internationally by overseas missions should be made in collaboration with DOS/MED, CDC/HHS, and WHO. Missions should establish potential thresholds and triggers (tripwires in conjunction with the WHO Phases) that indicate when communications demands are likely to escalate quickly. With these demands, DOS/MED and overseas missions will want to activate emergency communications plans, including information hotlines and an emergency communications website with links to the [www.pandemicflu.gov](http://www.pandemicflu.gov) website.

- B. Refining and delivering messages

DOS must take the following steps in collaboration with MED, CDC/HHS and WHO:

1. Provide regular updates and offer opportunities to address questions (partnership with news media, public forums, and printed or electronic messages).
2. Distribute practical information, such as travelers' advisories, infection control measures, and information about potential priority distribution of antiviral medications and first-generation vaccines. Be prepared to immediately address questions related to initial cases and to provide guidance to the public about disease susceptibility, diagnosis, and management.
3. Reinforce and verify ways to help people protect themselves, their families, and others, including self-care information for psychological well-being.

4. Address rumors and misinformation promptly and persistently.
5. Take steps to minimize stigmatization.

C. Providing timely, accurate information

Depending on health, economic, and overall societal effects (influenza-related illness and death), communications professionals should reassess and adjust to emerging needs and expectations of public and professional audiences. Areas for particular attention include:

1. Additional recruitment and training of subject-matter experts.
2. Procedures to keep communications lists, materials, and databases current and accurate.
3. Open and accessible channels for advice to the public, including ongoing functioning of hotlines in collaboration with DOS/MED and CDC-INFO telephone line.

Providing coordinated communications leadership across jurisdictional tiers (internationally with DOS/MED, CDC/HHS and WHO)

4. Work with all levels of officials to involve communications professionals on senior leadership teams, including roles as liaisons to international communications teams at DOS, CDC, WHO, OIE, FAO and other world organizations.
5. Maintain strong working relationships with:
  - a. Public affairs directors and information officers internationally from host country MOH, hospitals, NGOs, businesses, other country missions, and international organizations (WHO, OIE, FAO, World Bank, IMF, etc).
  - b. Communications staff of local and regional police, fire, and emergency management offices.
  - c. Regional health and emergency preparedness colleagues.
  - d. Local host country mental health agencies.
  - e. Hospital public relations/affairs departments.
  - f. Local Emergency Operations Center coordinators.

D. Promptly addressing rumors, misperceptions, stigmatization, and unrealistic expectations about the capacity of public and private health providers

To effectively respond to in-depth media analysis:

1. Monitor media reports and public inquiries to identify emerging issues, rumors, and misperceptions and respond accordingly.
2. Conduct “desk-side briefings” and editorial roundtables with media decision-makers.
3. Proactively address groups that voice overly critical, unrealistic expectations.
4. Establish trust with marginalized groups subject to or experiencing stigmatization and cite specific media outlets for inaccurate, misleading, or misguided reporting that may serve to encourage stigmatization.
5. Maintain scheduled access to pandemic subject-matter experts to balance the media's needs with other subject-matter expert priorities.

## **Supplement Eleven:**

### **Workforce Support: Psychosocial Considerations and Information Needs**

#### **Executive Summary**

Psychosocial issues will affect employees, response workers, healthcare workers, and their families. In addition to fears and disruptions caused by a pandemic, psychosocial issues will include fatigue, frustration, anxiety, anger, feelings of powerlessness and distress. Increased workloads will hamper communication between coworkers and between workers and family members. Family members of responders may experience stigmatization or discrimination. All of these factors will degrade the ability of all workers to maintain operational effectiveness.

DOS/MED and the MED/Office of Mental Health Services (MHS) strategies during both the pandemic alert and pandemic periods will encompass education and training in behavioral techniques to help personnel cope with grief, stress, exhaustion, anger, and fear during an anticipated prolonged emergency like a pandemic. Training efforts will also be aimed toward non-psychiatrist medical providers to include recognition of distress, emotional self-care and stress management in the field, traumatic grief, psychosocial aspects related to mass fatalities and ways to assist children and families during crises. Training efforts in workforce support will help employees adjust expectations about emotional responses they might experience or observe in coworkers and teach them how best to cope with them. Efforts will also be directed at strategies for maintaining family communications. Hot lines and confidential help lines will be set up in Washington and staffed by MED/MHS personnel to help deal with the demand for psychosocial guidance by both healthcare providers and official personnel and family members. MED/MHS will direct RMO/Ps to work with U.S. mission management and healthcare professionals to establish workforce resilience programs for pandemic responders and volunteers, as resources allow.

#### **I. Rationale**

The response to an influenza pandemic will pose substantial physical, personal, social, and emotional challenges for healthcare providers, emergency responders, and essential service workers. Experience with disaster relief efforts suggests that enhanced workforce support activities can help responders remain effective during emergencies. During an influenza pandemic, however, the occupational stresses experienced by healthcare providers and other responders are likely to differ from those faced by relief workers in the aftermath of a natural disaster. Globally and nationally, a pandemic might last for more than a year, while disease outbreaks in local communities may last 5 to 10 weeks. Medical and public health responders and their families will be at personal risk for as long as the pandemic continues in their community. Special planning is therefore needed to help employees maximize personal resilience and professional performance.

## II. Interpandemic and Pandemic Alert Periods

- A. DOS/MED and MED/MHS will:
1. Prepare educational and training materials on psychosocial issues for distribution to employees during an influenza pandemic.
  2. Lay the groundwork for the development and implementation of workforce resilience programs to maximize responders' performance and personal resilience during a public health emergency.
  3. Access, promote and apply HHS educational and training materials on psychosocial issues related to pandemic influenza for use by DOS/MED and overseas RMO/Ps, RMOs, FSHPs, RMTs, safety and security professionals.
  4. Provide guidance on the development of self-care strategies and workforce resilience programs. Planning for the provision of psychosocial support services might include the following activities:
    - a. Define tools and techniques for supporting staff and their families during times of crisis and ensure that mission personnel, supervisors, and management are familiar with and actively encourage their use.
    - b. Train overseas health unit staff (RMO/Ps, RMOs, FSHPs, local nurses and physicians, RMTs, local laboratory technologists and health unit administrative staff) in behavioral techniques to help cope with grief, stress, exhaustion, anger, and fear during an emergency.
    - c. Provide training in psychological support services to RMOs and FSHPs who are not behavioral health professionals, where feasible.
- B. DOS/MED/Mental Health Services and overseas RMO/Ps will work with DOS/MED staff, RMOs, FSHPs and post management to establish workforce resilience programs that will help deployed healthcare and volunteer workers prepare for, cope with, and recover from the social and psychological challenges of emergency field work.

DOS/MED/ and the Office of Mental Health Services will:

1. Plan for a long response (i.e., more than 1 year).
2. Identify pre-deployment briefing materials.
3. Provide DOS/MED personnel with information on:
  - a. Cognitive, physiological, behavioral, and emotional symptoms that might be exhibited by patients and their families (especially children), including symptoms that might indicate severe mental disturbance.
  - b. Self-care in the field (i.e., actions to safeguard physical and emotional health and maintain a sense of control and self-efficacy).
  - c. Cultural (e.g., professional, educational, geographic, ethnic) differences that can affect communication.
  - d. Potential impact of a pandemic on special populations (e.g., children, ethnic or cultural groups, the elderly).

### III. Pandemic Period

- A. DOS/MED/Mental Health Services and overseas health units will:
  - 1. Continue and augment activities implemented during interpandemic and pandemic alert periods.
  - 2. Provide, either from MED/Washington or through RMO/Ps in the field, psychological and social support services for employees and their families, as resources allow.
  - 3. Address stigmatization issues associated with participation in such services.
  - 4. Implement workforce resilience programs.
  - 5. Provide occupational health guidance on psychosocial issues related to the pandemic, including information on anticipated reactions to restrictive public health measures such as quarantine.
- Prepare workforce support materials (in hard copy or electronic format) for distribution during a pandemic. These materials will be designed to:
  - a. Educate and inform employees about emotional responses they might experience or observe in their colleagues and families (including children) during an influenza pandemic and about techniques for coping with these emotions.
  - b. Educate employees about the importance of developing “family communication plans” so that family members can maintain contact during an emergency.
  - c. Describe workforce support services that may or may not be available during an emergency, including confidential behavioral health services and employee assistance programs.
- 7. Prepare strategies to help healthcare workers and overseas U.S. mission communities identify and cope with stressors related to pandemic influenza:
  - a. Signs of distress.
  - b. Traumatic grief.
  - c. Psychosocial aspects related to management of mass fatalities.
  - d. Stress management and coping strategies.
  - e. Strategies for building and sustaining personal resilience.
  - f. Behavioral and psychological support resources.
  - g. Strategies for helping children and families in times of crisis.
  - h. Strategies for working with highly agitated patients.
- 8. Advocate strategies that will include:
  - a. Rest and recuperation sites. Sites can be stocked with healthy snacks and relaxation materials (e.g., music, relaxation tapes, movies), as well as pamphlets or notices about workforce support services.
  - b. Confidential telephone support lines, most likely located in Washington, staffed by behavioral health professionals.
  - c. Services to families of employees who work in the field, work long hours, and/or remain in health units and hospitals or other workplaces overnight might include:

- (1.) Help with issues related to the care or well being of children.
  - (2.) Provision of cell phone or wireless communication devices to allow regular communication among family members.
  - (3.) Provision of information via websites or hotlines.
  - (4.) Access to expert advice and answers to questions about disease control measures and self-care.
  - (5.) Workers might need alternative transportation and scheduling (e.g., carpooling, employer-provided private transportation, alternate work schedules during off-peak hours) to avoid exposure to large groups of potentially infected persons.
9. Ensure that employees have ongoing access to information from post senior management related to:
  - a. International, national, and local progress of the pandemic.
  - b. Work issues related to illness, sick pay, staff rotation, shift coverage, overtime pay, use of benefit time, transportation, and use of cell phones.
  - c. Family issues, especially the availability of child care.
  - d. Healthcare issues such as availability of vaccines, antiviral drugs, and personal protective equipment (PPE); actions to address understaffing or depletion of PPE and medical supplies; infection control practices as conditions change; approaches to ensure patients' adherence to medical and public health measures without causing undue anxiety or alarm; management of agitated or desperate persons; guidance on distinguishing between psychiatric disorders and common reactions to stress and trauma; management of those who fear they may be infected, but are not (so-called "worried well"); and guidance and psychosocial support for persons exposed to large numbers of influenza cases, deaths and persons with unusual or disturbing disease symptoms.
  - e. Because workers, healthcare and otherwise, might be called upon to fill in for sick colleagues and perform unfamiliar tasks, post management will be urged to consider providing written instructions for "just-in-time" cross training on essential tasks.
  - f. Other occupational groups that might participate in the response to pandemic influenza (including security officers, CERT teams and other emergency responders and volunteer community outreach workers) will receive training materials that will help them anticipate behavioral reactions to public health measures such as movement restrictions (e.g., quarantine, isolation, closure of airports, inability to travel), especially if such actions are compounded by an economic crisis or abrupt loss of essential supplies and services.
10. Observe for stigmatization issues:

Healthcare workers and other emergency responders will be provided with information on what to do if they or their children or other family

members experience stigmatization or discrimination because of their role in the pandemic influenza response.

11. Implement workforce resilience programs

During an influenza pandemic, DOS/MED will consider implementing workforce resilience programs that meet the special needs of deployed workers—including workers who do not change job site but whose assignments shift to respond to the pandemic and first responders or volunteers—and the central operations personnel who support them around the clock. Workforce resilience programs could, as resources allow, provide the following services:

a. Predeployment/assignment:

- (1.) Conduct briefings and training on behavioral health, resilience, stress management issues, and coping skills.
- (2.) Train supervisors in strategies for maintaining a supportive work environment.

b. During deployment/assignment.

- (1.) To support responders in the field:
  - ✓ Deploy teams and/or assign “buddies” to maintain frequent contact and provide mutual help in coping with daily stresses.
  - ✓ Frequently monitor the occupational safety, health, and psychological well-being of deployed staff.
  - ✓ Provide access to activities that help reduce stress (e.g., rest, hot showers, nutritious snacks, light exercise).
  - ✓ Provide behavioral health services, as requested and as resources permit.
- (2.) For central operations personnel, including Washington-based task forces:
  - ✓ Enlist stress control or resilience teams, as resources allow, either from near or afar, to monitor employees’ occupational safety, health, and psychological well-being.
  - ✓ Advocate establishment of rest and recuperation sites and encourage their use.
  - ✓ Provide behavioral health support services, as requested and as resources permit.
- (3.) For families of responders:
  - ✓ Enlist employee assistance programs to provide family members with remote support and psychosocial support (e.g., family support groups, bereavement counseling, and courses on resilience, coping skills, and stress management). This might include working with U.S. mission community liaison coordinators (CLOs).
  - ✓ Provide a suggestion box for input via e-mail or anonymous voice-mail with a toll-free number.
  - ✓ Continue to provide outreach to employees’ families to address ongoing psychological and social issues.

- ✓ Throughout the response, policies on personnel health and safety should be reviewed and revised, as needed.

B. Post-deployment/assignment

1. Interview responders and family members (including children) to assess lessons learned that might be applied to future emergency response efforts.
2. Provide ongoing access to post-emergency psychosocial support services for responders and their families (on-site or through regional or Washington-based resources).
3. Conduct an ongoing evaluation of the after-effects of the pandemic on employees' health, morale, and productivity.

Box 1.

Psychosocial Issues for Response Workers

Psychosocial issues that response workers might need to address include:

- Illness and death among colleagues and family members
- Fear of contagion and/or of transmitting disease to others
- Shock, numbness, confusion, or disbelief; extreme sadness, grief, anger, or guilt; exhaustion; frustration
- Sense of ineffectiveness and powerlessness
- Difficulty maintaining self-care activities (e.g., getting sufficient rest)
- Prolonged separation from family
- Concern about children and other family members
- Constant stress and pressure to keep performing
- Domestic pressures caused by school closures, disruptions in day care, or family illness
- Stress of working with sick or agitated persons and their families and/or with communities under quarantine restrictions
- Concern about receiving vaccines and/or antiviral drugs before other persons

These issues may be exacerbated by:

- Lack of information
- Rumors, misconceptions, or conspiracy theories
- Loss of faith in health institutions, employers, or government leaders
- Belief that medical resources are not available or fairly distributed
- Death of immediate supervisors or other leaders in the response effort
- Mass casualties and deaths among children
- Economic collapse or acute shortages of food, water, electricity, or other essential services
- Restrictions on civil liberties that are perceived to be inequitable
- Infection control procedures that limit personal contact or hinder communications

Box 2.

Psychosocial Issues for Families of Response Workers

The families of responders will face many challenges in addition to the fears and disruptions that everyone will face during a pandemic. For example:



- Responders might be frustrated, tired, worried, irritable, argumentative, restless, emotional, or distressed.
- Responders might be impatient and less understanding, energetic, optimistic, good natured, or helpful than usual.
- Increased emergency work loads (which might be exacerbated by staffing shortages) can make it difficult for responders to communicate regularly with family members.
- Family members might experience stigmatization or discrimination.

### Box 3.

#### Impact of Pandemic Influenza on Healthcare Workers

In addition to the issues faced by all response workers, healthcare workers may experience:

- Increased risk of exposure to pandemic influenza
- Constant need to take special precautions to avoid exposure to the pandemic virus
- Illness and death among patients, as well as among colleagues and family members
- Stigmatization and discrimination associated with being perceived as a source of contagion
- Ethical dilemmas, such as conflicts between one's roles as healthcare provider and parent/spouse, or concern about receiving vaccines or antiviral drugs before other people
- Increased difficulty in performing crucial tasks and functions as the number of severely ill patients increases, the healthcare staff decreases, and medical and infection control resources are depleted
- Frustration regarding the need/expectation to maintain business as usual
- Physical isolation associated with use of infection control measures that limit interpersonal contact

### Box 4.

#### Lessons Learned During the 2004-2005 Tsunami Relief Effort

- It is difficult to prepare responders for everything they might encounter.
- Even seasoned responders can face situations and issues that cause uneasiness and distress.
- It is not unusual for responders to be asked to work outside their areas of expertise.
- Concerns about family and friends rank high on responders' lists of priorities.
- Timely, accurate, and candid information should be shared to facilitate decision-making.
- Self-help activities are essential to mission completion.
- Everything possible should be done to safeguard responders' physical and emotional health.
- Responders do not need to face response challenges alone. They may share their experiences with buddies, teammates, family members, and colleagues.
- It is especially difficult for responders to maintain personal resilience when they witness the deaths of children.

- Organizational differences among groups of responders and cultural differences between victims and responders can impede the timely and efficient provision of emergency services.

## **Supplement Twelve: Domestic Plan**

### **Executive Summary**

The DOS Domestic Pandemic Plan focuses on strategies to limit employee exposure to the influenza virus through public health measures that include social distancing, cough etiquette, hand washing and appropriately permissive leave policies. Areas occupied by workers becoming sick should be cleaned with soap and water or EPA registered disinfectant-detergents.

During a pandemic, employees who suspect that they are becoming ill will be directed to web-based resources or telephonically to Task Force personnel for assisted self-diagnosis. Crowding into small health units for this purpose risks unnecessary exposure and is to be avoided. MED will assist those thought to be infected by directing them to appropriate local clinical resources.

All domestic federal agency personnel will rely on local physicians, hospitals, and outpatient facilities for essential medical services. Local health departments in coordination with HHS will likely be the conduits for antiviral treatment and any available vaccine, dispensed from the Strategic National Stockpile, if these drugs prove effective,

### **I. Surveillance Roles and Responsibilities**

Surveillance activities for early detection and isolation of novel virus strains by DOS/MED domestic occupational health units or other DOS facilities will be closely coordinated with local and state or district public health authorities and HHS/CDC. State and local Pandemic Influenza Plans are in place as requested by HHS/CDC.

See <http://eic.rrc.dc.gov/eic/cwp/view.asp?a=3&Q=563314&PM=1> as the website for the District of Columbia Pandemic Influenza preparedness that designates public health authorities for DOS facilities in the District.

See [http://www.vdh.virginia.gov/epi/VaPanFluPlan\\_v062005\\_F.pdf](http://www.vdh.virginia.gov/epi/VaPanFluPlan_v062005_F.pdf) as the website for the Virginia Pandemic Influenza Preparedness that designates public health authorities for DOS facilities in Virginia.

See <http://edcp.org/pdf/THEPLAN3READ.pdf> as the website for the Maryland Pandemic Influenza Preparedness that designates public health authorities for DOS facilities in Maryland.

See <http://www.pandemicflu.gov/> for all other states' websites and links for Pandemic Influenza Preparedness that designates public health authorities for DOS Offices or facilities in all other domestic locations.

### **II. Healthcare Planning and Response**

A. Planning organization

1. Pandemic Influenza planning is directed by the Domestic Emergency Action Committee (DEAC) as part of the development of the Domestic Emergency Action Plan (DEAP) under the Chairmanship of the Undersecretary for Management with members Assistant Secretary for Administration, Assistant Secretary for Diplomatic Security, Assistant Secretary for Resource Management, Assistant Secretary for Public affairs, Assistant Secretary for Congressional Affairs, Chief Information Officer, Designated Agency Safety and Health Officer (the Medical Director), Director General of the Foreign Service, Director of the Foreign Service Institute, Executive Secretary, Legal Adviser, Coordinator of Counter Terrorism and the Chief of Staff.
2. The Deputy Assistant Secretary for Operations works in consultation with the Designated Agency Safety and Health Official (DASHO, DOS/MED) to develop, review and approve the DEAP annually and assure proper execution of the DEAP while working closely with the Director of Domestic Facilities Protection.
3. MED DASHO will work closely in an advisory role to the Office of Emergency Management (OEM) that has the responsibility for coordination/incident command. OEM will direct the domestic facility's planning and response efforts during emergencies such as pandemic influenza.
4. MED DASHO will assist domestic facilities in establishing contacts in the local medical or public health community as directed by the particular state or HHS Plan.

B. Communications

1. The Medical Director (DASHO) in coordination with the DEAC will identify persons responsible for updating public health reporting and designate a clinical spokesperson. They will also assist with external communications with the media through the Bureau of Public Affairs (PA).
2. The DEAC through the DOS Informational Officer (IO) and PA will determine how to keep Department senior management, employees and visitors informed of the ongoing impact of pandemic influenza on Department domestic activities and facilities. They will consider what type of MED-specific communications (e.g., press releases, town meetings, community bulletin boards) might be needed, and develop templates for these materials.  
The DASHO will assist Crisis Management (S/CMS) with telephone hotlines in coordination with Crisis Management (S/CMS). The DASHO, CA, and PA will identify the types of information to provide and the types of inquiries that will be referred to local healthcare facilities, public health departments, and the HHS.  
DOS/MED will develop training modules, protocols and algorithms for use by any clinical hotline staff.

3. The DEAC and DASHO will confer with PA, Informatics (IRM) and Medical Informatics to develop IT solutions to communication challenges.

C. Education and training of staff

1. DEAC will develop education and training plans to address the needs of employees by utilizing training materials from HHS agencies, WHO and professional associations.
2. DEAC will identify educational resources for DOS clinicians, including federally sponsored teleconferences, WHO and CDC programs, web-based training materials, and Department prepared presentations (DVD on Infection Control).
3. MED will establish training/education programs for domestic facility health unit staff in preparation for pandemic influenza.
4. If the HHS is able to staff in-house facilities, they, in coordination with MED, will utilize this intake and triage staff to detect patients with influenza symptoms and to implement immediate containment measures to prevent transmission within domestic facilities.  
MED/Office of Mental Health Services (MHS) will:
  - a. Supply guidance for providing psychological support to domestic employees during influenza pandemic.
  - b. Identify or develop educational materials on: signs of distress, traumatic grief, stress management, and effective coping strategies, building and sustaining personal resilience, and behavioral and psychological support resources.

D. Triage, clinical evaluation, and admission procedures

1. MED will train occupational health units to identify persons who might have pandemic influenza, separate them from others to reduce the risk of disease transmission, and identify the type of care they require i.e., home care, local physician care/hospitalization.
2. In coordination with HHS for staffing needs, MED will attempt to utilize the following triage mechanisms:
  - a. Assigning separate waiting areas for persons with respiratory symptoms
  - b. Assigning a separate triage evaluation area for persons with respiratory symptoms

E. Facility access

M/DEAC, HR and MED, on the advice of HHS and WHO, will establish procedures to limit access to the facility if pandemic influenza spreads through the community, encouraging “not coming to work if ill, call in on the **HOTLINE**”, and to:

1. Develop criteria or “tripwires” for telephonic screening of employees before entry into DOS health units.
2. Develop criteria or “tripwires” for setting up external screening sites.

F. Occupational health

1. If available in DOS facilities, MED domestic health units will attempt to protect workers from exposures in the healthcare setting through the use of recommended infection control measures (see Supplement 4 HHS Pandemic Plan) and evaluate symptomatic and ill personnel to refer appropriately to local healthcare facilities or to home care. This may be possible only with augmentation of manpower by HHS provided health care workers.
  2. DEAC, with advice from MED will work with HR to establish that time-off policies and procedures consider staffing needs (COOP) during the periods of the pandemic, to discourage sick workers reporting for duty and to plan for work from home arrangements during periods of HHS/CDC directed disease containment strategies (e.g. “snow days”, quarantine) (see Supplement 8 HHS Pandemic Plan).
  3. MED will promote annual influenza vaccination among all employees and eligible family members.
- G. Psychosocial health services  
MED Office of Mental Health and Employee Consultation Services (ECS) will identify local mental health resources, where possible, for counseling services for employees during a pandemic.
- H. Local Healthcare  
MED will work with HHS, public health and local hospital officials to establish referral patterns for DOS domestic staff.
- I. Continuation of essential medical services  
Local hospitals and outpatient facilities will be relied upon for essential medical services. MED occupational health units, perhaps staffed by HHS personnel, will screen employees who become ill on-the-job and refer them to local facilities as indicated.
- J. Alternative care sites  
Based on the HHS plan for containment (see Supplement 4), HHS and the local public health departments will be responsible for determining the need for and the establishment of alternative care sites.

### III. Infection Control

MED will establish strategies to prevent pandemic influenza in the domestic workplace based on guidance provided in Supplement 4, HHS Pandemic Plan, pertaining to person-to-person influenza transmission, i.e., airborne droplets, direct contact, and small-particle aerosols.

- A. Emphasis will be placed on basic infection control principles: limiting contact between infected and non-infected persons; isolating infected persons (stay at home if ill); promoting spatial separation of at least 3 feet; protection of caregivers in healthcare settings by wearing goggles, gowns and surgical masks, (N-95 Respirator masks if doing aerosolizing

procedures); wearing gloves for respiratory secretion contact; performing hand hygiene (washing) after contact with potentially infected persons; containing infectious respiratory secretions (masking the ill and utilization of respiratory hygiene/cough etiquette).

- B. The elements of respiratory hygiene/cough etiquette include: Education of all staff, healthcare workers (HCW), and visitors by posting signs with instructions, Cough and sneeze covering (tissues usage), encouragement to utilize hand washing materials, and spatial separation of greater than 3 feet.
- C. Masks, gloves, gowns and goggles (Personal Protective Equipment, PPE) are utilized only by healthcare workers or placed on potential patients at HCW discretion if HHS and MED staffed Occupational clinics are established.

#### IV. Clinical Guidelines

MED will establish procedures for initial screening, assessment and referral of patients during all periods of a potential pandemic of influenza. Domestically, the imperative is to quickly identify suspected patients so that they may be referred to local caregivers for a thorough, rapid evaluation and treatment with immediate isolation to prevent further transmission. MED will follow guidance set forth by HHS, state and local health departments to establish HHS and MED staffed clinics if possible.

#### V. Roles and Responsibilities of MED Occupational Health Units and Clinical Laboratories

Occupational health units that may be established and staffed with HHS and DOS medical workers who will identify patients with suspected novel or pandemic influenza and refer them to local private or public healthcare providers who will be responsible in coordination with state and local public health authorities for ordering and supervising clinical laboratory testing. Employees who call-in on MED staffed hotlines, will be instructed to contact their local health care providers directly if they develop symptoms suggestive of pandemic influenza outside of the workplace. They should contact MED via the “hotline” to report if they are diagnosed as likely having pandemic influenza. Domestic DOS employees working in locations without occupational health units should monitor their health status and report to their local healthcare providers should they become ill with an influenza-like illness.

The DOS/MED lab does not have the testing capability for detection and diagnosis of seasonal influenza or novel (Avian) influenza like viruses and will serve only to coordinate MED’s overseas pandemic influenza laboratory activities.

#### VI. Vaccine Distribution and Use

In coordination with HHS and local public health authorities, MED will establish procedures and prepare for administration of any newly developed pandemic influenza vaccine that is provided by HHS from national stockpiles. The HHS will provide

recommendations for vaccine distribution, establishment of priority groups, monitoring of adverse events, tracking of vaccine supply and administration, effectiveness studies, legal preparedness, communications, training, data collection in use, effectiveness and safety while monitoring for development of drug resistance.

MED will coordinate administration of the vaccine and available supplies through DOS occupational health units if available and as conditions allow (see Supplement 6 of HHS Pandemic Plan).

## VII. Antiviral Drug Distribution and Use

Domestically, once a pandemic is declared, a patient with a suspected case of influenza with a novel virus or pandemic strain should be isolated as described in the HHS Plan, Supplement 4, and treated in accordance with Supplement 7. The recommendation for treatment includes the use of oseltamivir (Tamiflu) or zanamivir (Relenza), administered as early as possible and ideally within 48 hours after onset of symptoms. HHS and local public health authorities will recommend doses for antiviral treatment and provide the medication from US stockpiles.

MED WILL DISTRIBUTE ANTIVIRAL DRUGS TO DOMESTIC EMPLOYEES ONLY IF THE HHS PROVIDES THE MEDICATIONS, RESOURCES AND PERSONNEL TO MAKE THE REQUIRED DIAGNOSIS, ASSESS RISKS, AND PROVIDE FOLLOW-UP MEDICAL CARE.

## VIII. Community Disease Control and Prevention

Containment strategies aimed at controlling and slowing the spread of the virus might include measures that affect individuals (e.g., isolation of patients and monitoring their contacts) as well as measures that affect groups or entire communities (e.g., cancellation of public gatherings; “snow days”, limited public transportation and business closures). Implementation of community-wide “snow days” will be guided by epidemiological data, local public health authorities and HHS/CDC who will recommend to the local and national governmental authorities the most appropriate of these measures to maximize impact on disease transmission and minimize impact on individual freedom of movement. Containment measures applied to individuals (e.g., isolation and quarantine), may have limited impact in preventing the transmission of pandemic influenza, thus, community-based containment measures (e.g., closing schools or restricting public gatherings) and emphasizing what individuals can do to reduce their risk of infection (e.g., hand hygiene and cough etiquette) may be more effective disease control tools. DEAC and HR with MED recommendations will establish policies for work-from-home scenarios with COOP considerations.

## IX. Travel-Related Risk of Disease Transmission

Domestically, DOS employees will be subject to the same travel limitations to be imposed by M/DEAC and HR that any other US traveler will experience. These restrictions will be implemented by authorities such as HHS, DHS, DOT, Coast Guard, FAA, and others, (See Supplement 9 of the HHS Plan). Business and temporary duty travel will be greatly restricted if not cancelled entirely.



For approximately 2 days before becoming ill and while ill, infected people are capable of spreading the virus to others. It will not be possible to detect all infected and ill travelers, but early in a pandemic, attempts to do so might slow the spread, allowing additional time for implementation of response measures such as vaccination. Once a pandemic is underway, *exit screening* of travelers from affected areas (“source control”) is likely to be more efficient than *entry screening* to identify ill travelers. Early in a pandemic, “entry screening” may decrease disease introduction in any given country. However, as pandemic disease spreads, ongoing indigenous transmission will exceed new introductions and authorities will discontinue this strategy. Limitations on personal and business travel, as persons decide to limit their own personal risk, will decrease the amount of disease spread.

## X. Public Health Communications

DOS domestic communications preparedness for influenza pandemic should follow key risk communications concepts:

- A. During influenza pandemic, employees need information about what is known and unknown and interim guidance to formulate decisions to help protect their health and the health of others.
- B. Coordination of message development and release among DOS facilities is critical to help avoid fear and anxiety, and impede response measures.
- C. Technically correct and succinct information presented during influenza pandemic should minimize speculation and avoid over-interpretation of data, overly confident assessments of investigations and control measures.

The influenza pandemic will generate immediate, intense, and sustained demand for information from DOS employees, healthcare providers, policy makers, and news media. Dissemination of timely, transparent, accurate, science-based information about pandemic influenza and the progress of the response can build public trust and confidence. The domestic communication plans should identify dissemination procedures and channels for forwarding communications from HHS/CDC and local public health authorities. As the influenza pandemic unfolds, HHS and its agencies will relate essential information through well-established channels and formats (CDC's Emergency Communication System, EPI-X).

- D. MED, the DEAC, PA and the IO will develop effective information dissemination plans for an influenza pandemic including:
  - 1. Establish procedures to review and approve pandemic-related messages and materials.
  - 2. Establish and maintain a website or populate a facility specific website with current information.
  - 3. Work with DOS domestic information technology (IRM) professionals to build emergency websites, if necessary, that can help manage information requests when needed.

4. Develop communications materials in advance and store them on secure servers. Add the [www.pandemicflu.gov](http://www.pandemicflu.gov) website as a link to DOS Open Net and Internet websites.
  5. Establish protocols for frequently updated information, including daily disease activity reports. These may include morbidity and mortality figures, geographic location of cases, demographics of infected populations, and the number of persons hospitalized.
- E. DOS domestic and Federal hotlines, such as the CDC-INFO telephone line (1-800-CDC-INFO; 1-800-232-4636), should be available for public information. Local hotlines can tailor information to their localities. Hotline staff should be trained in advance and have access to the [www.pandemicflu.gov](http://www.pandemicflu.gov) website and to a local database of frequently asked questions.
- F. PA and the IO should prepare contingency plans for increased media demands. Early-confirmed cases of pandemic influenza will require preparations for focused media attention from local and international publications, especially from television. Regularly scheduled press briefings (daily) may reduce the volume of inquiries.
- G. PA and IO should develop and coordinate procedures with other agencies and organizations to avoid duplication when developing and pre-testing messages, and in training media spokespersons.

See the HHS Pandemic Plan, Supplement 10, for details for developing, testing and disseminating locally tailored messages and materials. Domestic health communications, including state and local public health efforts, should be directed to rapid sharing of appropriate, up-to-date information on what is known and what is unknown about the progression of the outbreak, the possible disruptions to routines and events, and contingency measures. Consistency in messaging across jurisdictions is strongly advised. The focus during the Pandemic Period should be on providing timely, accurate information by coordinating communications across domestic and international localities, and promptly addressing rumors, misperceptions, stigmatization, and unrealistic expectations.

## XI. Psychosocial Considerations and Information Needs

The reality of influenza pandemic will create psychosocial issues that will affect employees, response workers, healthcare workers, and their families. In addition to fears and disruptions caused by a pandemic, psychosocial issues will include fatigue, frustration, anxiety, anger, feelings of powerlessness and distress. Increased workloads will hamper communication between coworkers and between workers and family members. Family members of responders may experience stigmatization or discrimination. All of these factors will degrade the ability of all workers to maintain operational effectiveness.

MED will ask the MED/Office of Mental Health Services (MHS) and Employee Consultative Services (ECS) to develop strategies during both the pandemic alert and pandemic periods to encompass education and training in behavioral techniques to help domestic personnel cope with grief, stress, exhaustion, anger, and fear during an anticipated prolonged emergency like a pandemic. It is envisioned that HHS will have to

supply manpower to augment activities by MHS to manage patient consultations or to establish hotlines. When indicated, MED/MHS, HHS and ECS will direct employees to develop consultative relationships with local mental health providers. The HHS Pandemic Plan, Supplement 11 (<http://www.pandemicflu.gov/>) provides extensive details as guidelines for psychosocial preparedness.